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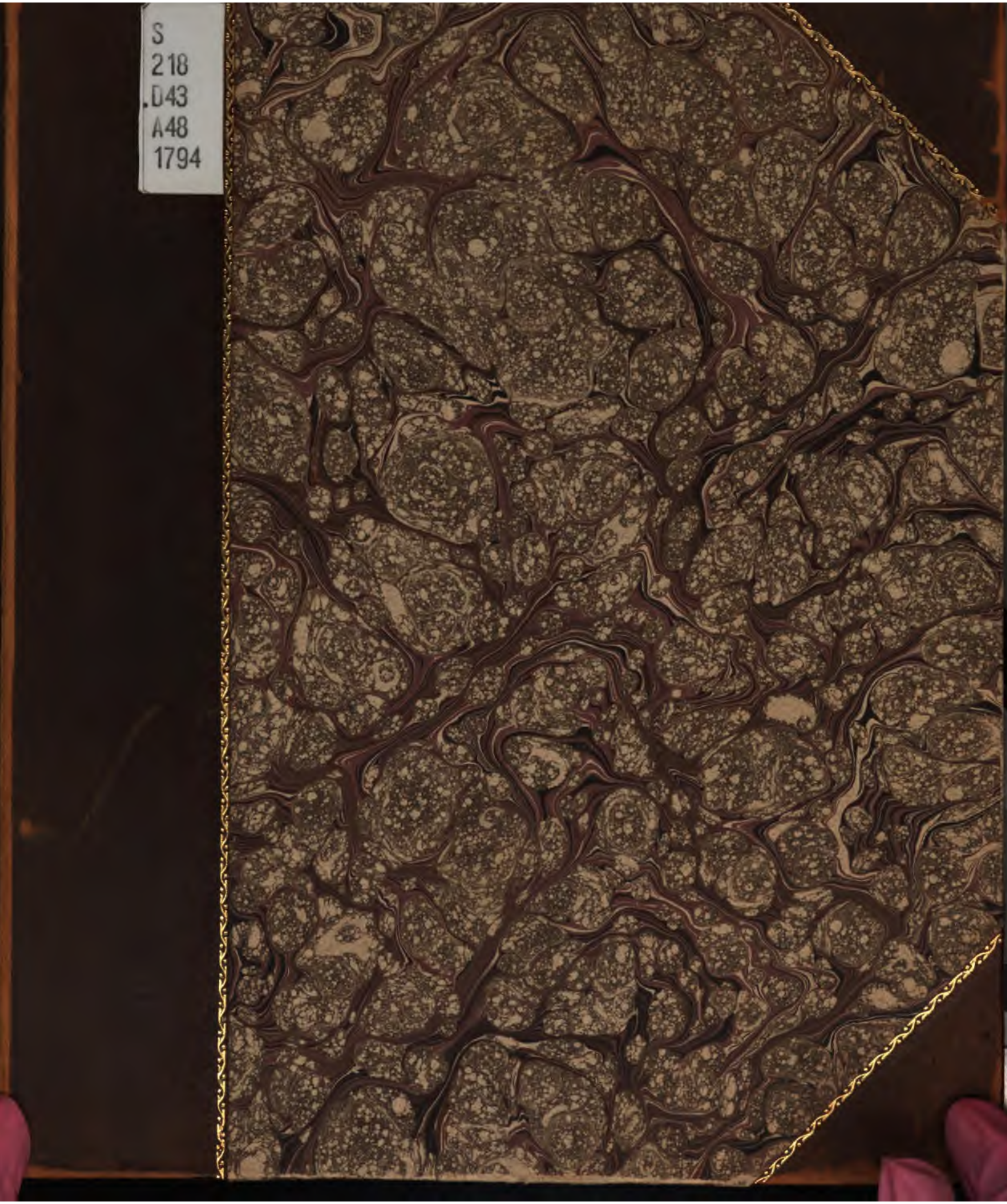

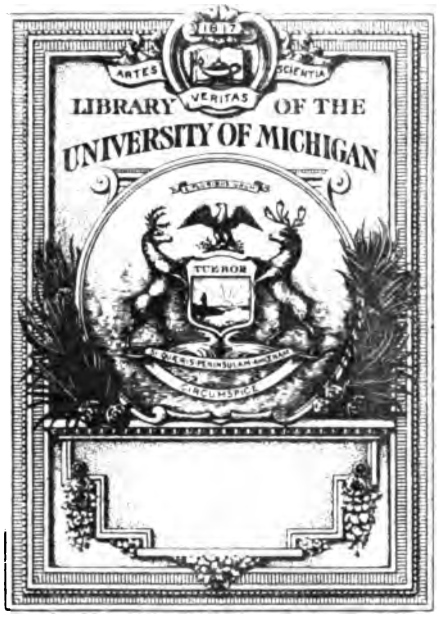
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GENERAL VIEW

OF THE

AGRICULTURE

OF THE COUNTY OF

DERBY,

WITH OBSERVATIONS ON THE MEANS OF ITS IMPROVEMENT.

BY THOMAS BROWN,

OF LUTON IN BEDFORDSHIRE.

DRAWN UP FOR THE CONSIDERATION OF THE BOARD OF AGRICULTURE AND
INTERNAL IMPROVEMENT.

LONDON:
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TO THE READER.

IT is requested, that this Paper may be returned to the Board of Agriculture, at its office in London, with any additional remarks and observations which may occur on the perusal, *written on the margin*, as soon as may be convenient.

It is hardly necessary to add, that the Board does not consider itself responsible, for any fact or observation contained in this Report, which at present is printed and circulated, for the purpose merely of procuring farther information respecting the husbandry of this district, and of enabling every one, to contribute his mite, to the improvement of the country.

The Board has adopted the same plan, in regard to all the other counties in the united kingdom; and will be happy to give every assistance in its power, to any person who may be desirous of improving his breed of cattle, sheep, &c. or of trying any useful experiment in husbandry.

London, July, 1794.

INTRODUCTION.

To Sir JOHN SINCLAIR, *Bart. President of the Board of Agriculture.*

SIR,

WHEN I had the honour of receiving your commands, to draw up an Account of the present State of Agriculture in the County of Derby, and the Means of its Improvement, I flattered myself, from what you informed me, that I should receive much assistance from the well known abilities of a Gentleman, whose local knowledge of the district would have rendered the task much less arduous. This Gentleman being very much engaged during the time I spent in Derbyshire, I could not obtain more than an hour's conversation with him; yet, in justice to his politeness, I have to acknowledge, that he rendered me every service and recommendation, which the short time he had to spare could possibly lead me to hope for.—Under this disappointment, I look to the indulgence and candour of the Board of Agriculture, as well as to that of the gentlemen and yeomanry of Derbyshire, to forgive every inaccuracy, misinformation, or omission, that a stranger must be liable to in executing the agricultural survey of a county.

In treating on this subject, I have endeavoured to follow the instructions of the Board, by giving the present state of Agriculture in the description of—The nature of the soil—The climate—The manner in which the land is possessed—The manner in which the land is occupied—The manner in which the land is employed—The rotation of crops—Grasses cultivated—Species of stock; under which I have mentioned, 1. cows, 2. sheep, 3. horses, 4. hogs—Irrigation—Grains principally cultivated; and under this head I have mentioned, 1. chamomile, 2. the practice of fallowing—Implements used in husbandry; as, 1. ploughs, 2. harrows, 3. carts, 4. waggons—Draught horses and oxen—Seed time and harvest—Inclosures and commons—Population—Labour, and hours of working—Drains and drainage—Paring and burning—Price of provisions—State of roads—State of buildings and farm-offices—Leases—Commerce and manufactures.

Under these heads, I have introduced such occasional remarks as occur to a person accustomed to husbandry in Hertfordshire.

My second object was the introduction of such miscellaneous remarks as occurred on my Tour; and these are principally confined to—Remarks on agricultural societies—Superabundance of and deficiency in provision—Exports and imports—Making cheese—Making whey-butter, and—Laying barn floors.

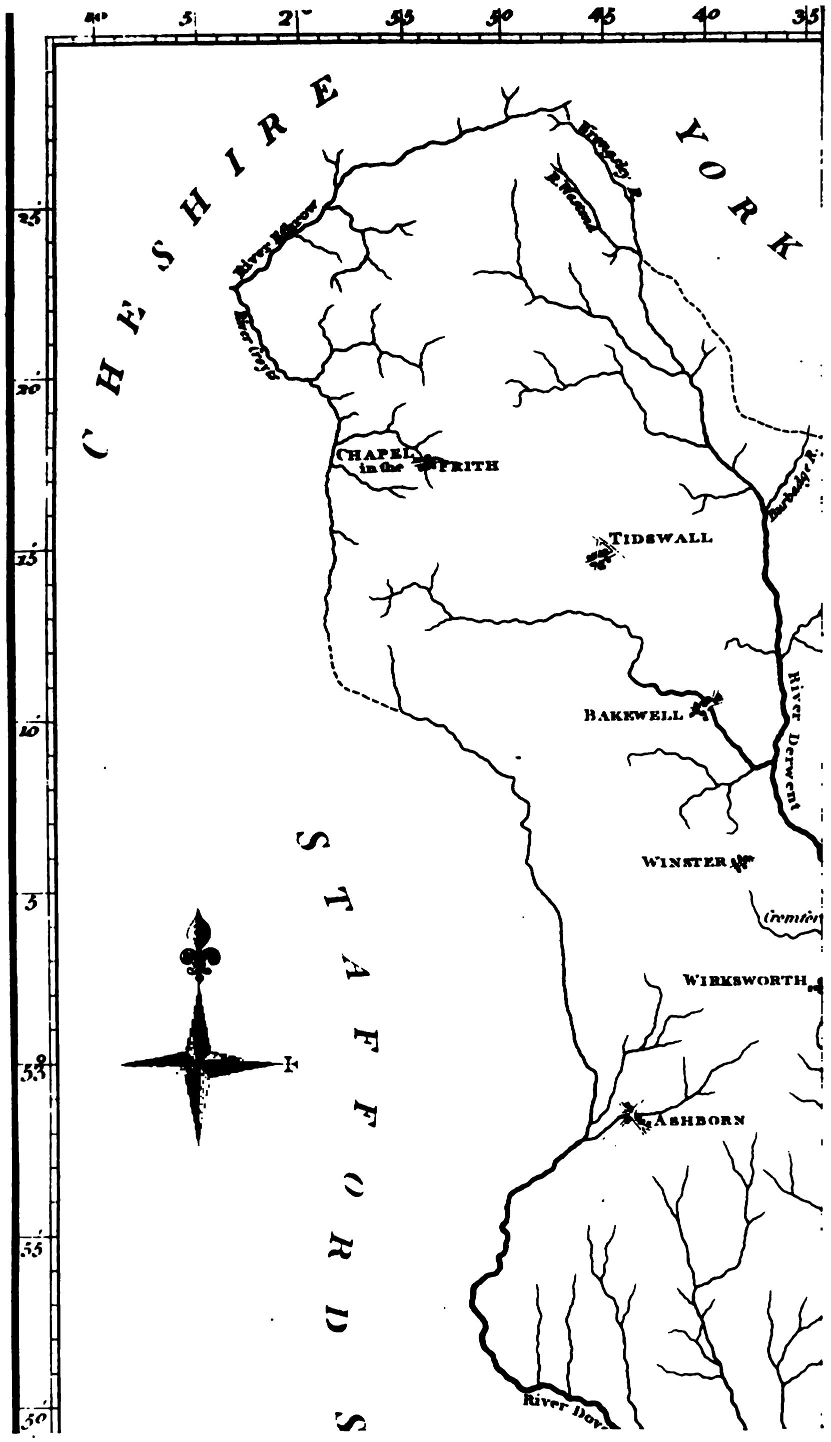
I have treated with much diffidence on tenures; in which I have mentioned the tenure of what is called the king's field; and—On tithes. In respect to these, and other subjects, I have barely hinted an opinion on the means of improvement; and with the same view I have given some thoughts—On the breed of cattle—On the management of soils, 1. in the fertile; 2. low peak; 3. high peak; 4. lime-stone soil; 5. grit-stone soil; 6. land capable of irrigation, or being converted to arable, meadow, or pasture; 7. soil that may be pared and burnt; 8. soil that may be planted;—and, in all situations, on the use and improvement to be made by leases.——The importance of the subject is admitted ——I have only to observe, that what I have done, the Board of Agriculture will please to consider as only a syllabus of what they have to hope from men of greater talents, of more leisure, and who have more local knowledge of the county. From those men I trust for candour in any remark they may please to make, assuring them, as well as the Board, that I should be extremely insensible, were I to omit acknowledging the civilities and attention which I received from the inhabitants of every denomination; and which I shall ever remember with gratitude and pleasure, and readily acknowledge my inability to render them that justice, the Board that service, and the subject that elucidation, which may reasonably be expected. I have the honour to remain,

Sir,

Your most obedient, and most obliged humble servant,

Luton, Bedfordshire,
July, 1794.

TH. BROWN.

40
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THE SOIL.

Of the County of Derby is various, as nature in her most capricious mood could form:—to trace these variations in agricultural language, or to attempt to mark them accurately on a plan of about six miles and an half to an inch, are difficulties of which every one must be sensible. These difficulties, though great, ought not however to damp all attempts to investigation. Nature in her most capricious mood observes something like universal laws; and we find this county *demarked* by what she has thought fit to elevate and depress—high and low—hill and vale. These the natives of Derbyshire have (taking a general view of the county) long ago denominated High Peak and Low Peak, leaving the more fertile parts of the county undistinguished by either: so that, generally speaking, to make a distinction of soil, the county admits of three parts, which I shall (as an introduction to observation and improvement) call—the Fertile,—the Low Peak,—and the High Peak. It is however remarkable, that in all of these, nature has made some marked varieties in the nature of the rock with which this county abounds: the agriculturist distinguishes them by lime-stone and grit:—the nice discriminations of the chemist I shall leave for the improvements that are to be made whenever this work may be rendered of general use. Following these outlines, I have given two small plans of the county; on the one I have marked the principal roads, and on the other the principal rivers; choosing that marked with the roads for my own observations; and leaving the other for the observations of those gentlemen who have more local knowledge of the county, and are willing to assist this work. I have pursued the three leading features of the county, and these I have subdivided into lime-stone and grit; in the grit I have marked where coals have been discovered. I shall now attempt something like an agricultural description of each.

Fertile Soil——is not inaccessible to the plough; it consists principally of a red loam on various sub-soils, approaching (in patches) nearer to marle, to clay, to black loam, to sand or grit, or to gravel, as may happen from the sub-stratum, or the atmospherical exposure; and these soils admit of other variations, from their proximity to springs, to rivers, or to stagnant water.

Low Peak——is more difficult of access, but in no instance inaccessible to the plough; it is however more strongly tinctured with quick transitions, but chiefly consists of drier sands or grits. The clays and loams here are in general more valuable (perhaps from being more scarce); and where they are not too much elevated, are certainly inviting for the husbandman to pulverize and subdue.

High Peak——is chiefly what the natives call a corn loam; this seems to me to consist of virgin earth impregnated with nitre on the mountains, and liberally poured down by them upon the happy vale. Where this corn loam is in sufficient quantity, and meets with a stratum of marle or clay, it forms a most desireable field for cultivation; but is ever overbalanced by the vast tracts of barren hills and mountains from which this soil is washed.

The sides of these mountains (forming a considerable part of the whole) present very little soil to view, being chiefly composed of rocks. Where the lime-stone forms the mountain (the flats on the tops, and where the sides are not too perpendicular for soil to lodge), the soil, though scanty, is productive of the finer grasses which form pasturage for sheep. Where grit-stone abounds, the soil in general approaches near to the nature of peat moss, in places forming vast morasses, retentive of water, and rendered dangerous for either man or beast to tread upon, except in dry weather; the surface presenting nothing but the barren, black moss, thinly clothed with heath or ling, and every where yawning out a dreadful rock.

In all these soils, very considerable alteration is made from the minerals of which the sub-stratum consists: but in conformity to my general plan, of only opening an introduction to what may be expected, when all hearts and all heads are united in improvement, and when every individual shall anxiously strive accurately to describe and improve his own situation; I shall only remark, that during my tour I did not discover lime-stone, grit-stone, and peat moss, under the same surface; and thinking it material in the future improvement of great part of this district, to add lime and peat moss, mixed with every other substance that will add to the quantity of staple; and with this view I beg leave to hint, as matter for future investigation, that if lime-stone, coal, and peat moss, are ever discovered in contact, I should think this a favoured spot for trying the experiment, which I shall hereafter take the liberty to suggest, when I come to treat on *Hints for Improvement.*

CLIMATE.

From the description that has been given of the soil and situation, a faint idea of the climate may be inferred—in general it is wet and cold. The degrees of cold vary more than are easily conceived; and although I am sensible that our feelings are not the proper scale by which we are to form our judgment of the different degrees of heat and cold, yet finding mine so sensibly affected, I could not help remarking that in travelling from Sudbury to Ashborn I found a pleasing temperature: passing through Ashborn, in my way to Buxton (without any apparent change in the atmosphere), before I had left Ashborn three miles, I found an additional coat absolutely necessary; and this sudden transition is every where felt, on ascending into atmospherical elevation. The fertile part of the county is salubrious and temperate, though inclining to wet. The mountainous part is cold, enveloped in clouds, and during the winter months much incumbered with snow; but during my tour I was not fortunate enough to meet with any regular account kept of the quantity of rain or snow; nor did I hear of any meteorological journals being kept in any part of the county. I have long been of opinion, that to ascertain the quantity of moisture that falls, and above all the proportion of time that the surface of any country is wet and dry, the hours of sunshine, and the hours of clouds, would in a great measure ascertain what the natural productions of the climate are, and fix some data for improvements in all situations. Every one may easily conceive the equal distribution of the sun's rays, when he considers that were it not for the intervention of clouds, vapours, and shadows, every spot on earth would be exactly half its time under the immediate influence of those rays; and must be equally sensible, that there are hardly two spots on earth (of an equal extent with this under investigation) that enjoy this blessing in the same degree. I trust I may venture to add, that the various productions of every climate, and of every county, as well as the cultivation and management of those productions, are greatly influenced by the obstructions the sun meets with; and as every place is capable of making a fair estimate of its natural advantages or disadvantages in this respect, I think it matter of curious and useful information, and of consequence as furnishing data on which hints for improvement may be formed. All that I could learn from local information on this subject, was, that at Chattesworth (situate between two mountains in the High Peak) the average quantity of rain is about one-third more than what falls in the vicinity of London. If any information, however, has been collected upon this subject, I trust that it will be transmitted to the Board.

THE MANNER IN WHICH THE LAND IS POSSESSED.

This county originally was in the possession of perhaps as few individuals as any part of the kingdom of an equal extent: we are told that at the time of the Norman survey, it belonged wholly to seventeen individuals; and some of the present possessions have lineally descended from those individuals down to their posterity, the present proprietors, but with considerable diminution in point of territorial extent. The acquisitions of the church, under the Roman superstition, took considerable root in this soil; but the distribution of her property, after the suppression of religious houses, seems to have fallen into many hands. The enterprising spirit of trade, cherished by a wise and excellent constitution, established at the glorious revolution, has diffused those immense possessions, dividing the territory, and hiding what used to be the ancient gentleman in obscurity. But by well-concerted marriages, hereditary possessions are in many instances wisely preserved; and in the county of Derby we find some rent-rolls upwards of £20,000; several upwards of 10,000; many of more than 3,000—Those families possessing a rental of 1000 pounds, or under that sum (where there are not other resources), risking their estates in trade, and bringing up their children to manufactures and commerce; and (what is too often the case) wherever agriculture is clogged with difficulties which require property and talents, they carry that property and those talents of which they are possessed into trade; leaving the improvement of the soil to men of less property, and consequently of less power—Fatigued with trade, the mutability of the human mind, previous to the approach of old age, frequently drives men of this description to gratify a second change of sentiment, and search for something new in the sequestered vale; and every where we find small habitations decorated with plantations, on a confined scale.

THE MANNER IN WHICH THE LAND IS OCCUPIED.

From the general division of property, it is easy to conceive the distribution of land amongst occupiers in Derbyshire. The estates of the nobility are well arranged for occupation, having long ago acquired a basis founded on experience.

The intelligent steward readily discovers what are the requisites, to enable the tenant to pay the most for such estates as he is consulted in letting; and in all well regulated estates, we find the advantages of landlords and tenants (a principle I always insist upon as inseparable) mutually consulted—The particular manner of its being so, will hereafter be the subject of a subsequent chapter. The smaller landholder (provincially *statesman*), who has not a sufficient capital in stock, and is unwilling to part with his hereditary property, finds his mind distracted how to preserve his estate, as well as the rank his father held, and how to improve his fortune on rational principles. For want of property, and a regular system, men of this description wander into labyrinths, where, if not worse bewildered, we find them sitting down in obscurity, content with the produce of their land—to use their own phrase, "*Sitch* as God sent."

The tradesmen's estates (the bulk of their fortune being otherwise employed) are confined to small territorial possessions; perhaps from hence arose the numberless misfortunes which recently shook the vitals of this country; but where these estates exist on any tolerable scale, they are emblematic of what the face of this country would be, if farming was equally studied, and on as regular a system as trade; therefore, generally speaking, there are in Derbyshire farms of a sufficient size to occupy that capital which forms full employment for a farmer; much of the county, however, is occupied in rather small farms (under £100. a year) and by men engaged in pursuits distinct from improvements in agriculture:—men either pursuing the riches of mines; men employed in the mechanical operations of manufactures; or men labouring for the tradesman, and whose attention is more immediately engaged in the operative part of manufactures than in the improvement of the soil they occupy. There are, however, in this county occupiers of another description, very properly styled yeomen; men cultivating their own estates with a sufficient capital, or employing a considerable capital in the occupation of the ancient hereditary estates of the gentry; here we discover the dawnings of solid advantage to themselves and the community, they are reducing the theory of agriculture into practice, and the improvements and discoveries made by them, (but of which I shall speak more particularly hereafter, under the description of cattle) are the sure experiments, tried and confirmed, which ought to excite every occupier of land in this or any other county, so far as local circumstances will admit.

THE MANNER IN WHICH THE LAND IS EMPLOYED.

This varies according to the nature of the soil; the circumstances of the occupier, and the nature of his tenure; and where-ever there appears any thing like a regular system, as among the yeomen which I have described.

In the fertile part of the county, about one-third is in tillage, the remainder being old sward, or resting under artificial grasses.

In the Low Peak, a greater part of the land is in tillage, the pastures being poor, they usually have two-thirds in tillage, the other third being employed as pasturage for the dairy or breeding of stock.

In the High Peak, about one fifth of the inclosures may be arable, and this fifth part chiefly employed in growing oats; the remainder is in pasture, and the greatest part employed in dairy and breeding of stock.

ROTATION OF CROPS.

Good husbandry being rather partial, when compared with the whole of the county;—but wherever it is practised,—

In the Fertile Soil, the rotation of crops are, after clover or other artificial grasses, 1. wheat, or oats, 2. fallow, manured and limed for turnips, 3. barley, and laid down with 5lb. of red clover, 5lb. of Dutch clover, 5lb. of trefoil, and 2 pecks of rye-grass seeds.

The mixture is varied according to the experience and judgment of the farmer, and according to the nature of the soil; in the wet strong lands rye-grass is found to be a very great impoverisher of the land, but in the lighter red loams, it makes excellent pasture, where the land is stocked with a mixture of bullocks and sheep. In the stronger clays they fallow for wheat; a crop of beans succeeds, and then fallow the bean stubble. The impoverishing farmer will take several successive crops of white corn, of which oats will make two or three; and when worn out with cropping, will lay the land down with foul hay-seeds, and a mixture of artificial grasses; yet even under this cruel treatment, it is wonderful to see the efforts this soil will naturally make to recover itself. In one of the best managed farms I saw, consisting of about 200 acres, there are 55 acres arable, 40 acres mown for hay, 105 acres fed with cows, bullocks, and sheep,—one-third of the 55 acres is summer fallowed for turnips, cabbages, or clean tilth; (this gives full scope for the intelligent farmer to exercise his judgment, and consult the nature and circumstances of the land to be fallowed.) One-third is wheat, and one-third is barley or oats. With the barley the farmer sows grass seeds, under which the land is rested, and in the next year he breaks up an equal quantity of that which is grazed, where the artificial grasses are exhausted, and the land most in want of restoration by lime, manure, and cleaning.

The soil of this farm is mostly a red loam, some places wet and inclined to springs; here the judicious farmer soughs his land in the fallow season, and gradually reduces the height of the old original broad lands; depending upon the more efficacious method of keeping the land dry by the soughs; which he lays in such a direction, as by a proper declivity to scour themselves, and carry off all the springs and superabundant wet.

The stock on this farm (besides the stock in the yards) consists of 8 mares, kept for breeding and the cultivation of the farm, 80 store ewes of the new Leicestershire breed, the produce of these 80 ewes are kept till they are turned of two years old, at which age they are fatted and sent to the butcher; so that there are usually 100 lambs reared from the 80 ewes; and 100 shar-hogs, the produce of the preceding year. The neat cattle consists of 78 grazing beasts, cows, and heifers.

The stock on this farm, the abundant crops, and cleanness of the land, sufficiently denote the excellency of the management. The arrangement of the crops gives every opportunity to adopt the most rational method of improving the soil, without obstinately pursuing either the cabbage farming, the turnip husbandry, or exploding the use of clean fallows (all of which are certainly good husbandry in different situations), and steering clear of that little consequential pride with which the human mind is tinctured, and which frequently makes its appearance by preferring some specific mode of agriculture, either because it was practised by our ancestors, or because it is the "child of our old age."

In some parts of the Fertile Soil, we find the following rotation of crops, on breaking up the land after the natural grasses are exhausted, or become unprofitable, and as preparatory to its being relaid; 1. oats, 2. fallow, 3. wheat, 4. turnips, 5. barley; and again rested under artificial grasses; this, I think, has its advantages, as it gives the land two fallows instead of one, and introduces five seasons instead of three, between the breaking up of the worn out grasses, and relaying the land with the same mixture: one of the evils the cultivator of artificial grasses has to contend with is, that after repeated sowings, the land will tire of clover, or any other seed that is too frequently sown; and I believe it is an uncontroverted fact, that the seldomer any land is sown with clover, (and indeed I believe I may add, any other grass, corn, or grain,) the greater probability there is of success, both in the abundance and duration of the crop. In many of the lands that are not deemed too wet for grazing with artificial grasses, and are therefore kept for the more immediate production of corn, the following is not an unusual rotation of crops; 1. fallow, 2. wheat, 3. beans, 4. barley, 5, oats, and again fallow. Here I cannot be persuaded, but that any land that has long been under this rotation, may be improved by carrying off the superabundant moisture, and introducing green crops; confining my observations still to what I call the Fertile Soil, I have met with situations, where the following course of cropping is pursued,

1. oats, 2. fallow, 3. wheat, 4. barley, 5. oats, 6. beans, 7. turnips, or cabbages, 8. barley, 9. clover.

There may be some advantages in this mode; I fear they are all on one side, for surely wheat, barley, oats, beans, are bad preparatives for turnips or cabbages.

In the Low Peak, the most approved rotation of crops are, after breaking up where the artificial pasture is exhausted, 1. oats, 2. turnips, 3. barley, 4. clover, 5. wheat, 6. fallow, 7. wheat, 8. pasture. The introduction of a crop of clover, between the time of breaking up and relaying, and the two crops of wheat so near to each other, as well as sowing the seeds with a wheat crop, appears to me exceptionable: but the experience of intelligent men and facts, are stubborn things, when opposed to matter of opinion.

On the lands that are not rested as pasture, the common rotation after fallow is, 1. wheat, 2. oats, 3. pease. Here I am persuaded, that if the crop of oats were omitted, the pease would be a good preparative for turnips or cabbages, and by soughing this land, and introducing that crop, it would be highly improved.

On the better soils in this district we meet with the following rotation of crops, where lands are broke up with a view to improve and relay, 1. wheat, 2. oats, 3. pease, 4. barley, 5. clover; —or, 1. fallow, 2. wheat, 3. clover, 4. wheat, 5. oats, or pease.

Both of these rotations I think exceptionable, and if my experience in other counties, and the cursory view I have had of the nature of this land, can authorize me to suggest an improvement, it would be, after breaking up the exhausted artificial pasture, to sow

Oats.
Fallow for turnips, or cabbages.
Barley —— oats.
Turnips —— fallow.
Barley —— barley.

} Consulting the nature of the soil in the choice.

And with this crop of barley to relay the land with clover —— and other grass seeds, suited to the nature of the soil.

And on land intended to be continued in tillage to

Fallow for turnips, or cabbages.
Barley —— oats.
Turnips —— fallow.
Barley —— barley.
Clover —— clover.
Wheat —— wheat.
Oats —— oats.

Consulting the nature of the soil in the choice.

Or, according to the nature and condition of the land from the operations of the season, I would again turn the land to fallow after the wheat stubble.

Travelling farther north in the High Peak, we find hardly any thing like a regular rotation of crops; the quantity of land under tillage is comparatively nothing, on taking a general view of the county; oats, oats, oats, oats, (and alas, sour oat cakes!) a few potatoes, a little barley, and still less wheat, would be the food of the natives, did not their neighbours cultivate their land better than they do. Their mutton, however, is excellent, as I shall hereafter observe. At Hurdlow house I was obliged to partake of its genuine taste, for want of either bread or vegetable; or, "wait till the baker came." Here,

"Far as the eye could reach, no trees were seen,
"Earth clad in russet, scorn'd the lively green."

Stone walls, meagre inclosures, daring rocks, and a few miserable animals "such as God sent," are the only objects presented to our view.

I shall, therefore, dismiss this subject, till I come to speak of improvements.

GRASSES CULTIVATED.

From what has been said on the rotation of crops, it will appear that the broad-leaved clover, rye-grass, trefoil, and white clover, are the principal seeds sown for artificial pastures. Occasionally we find here and there the ribbed grass, or plantain, introduced.—The meadows produce all the natural grasses common to the soils and situations described.

SPECIES OF STOCK.

The number of recent inclosures, and the natural tendency of the soil to graze cattle, have greatly increased the quantity of meadow and pasture land; and this being chiefly employed in dairying and rearing of stock; the produce of the dairy forming the chief article from which the rents are made, the Derbyshire farmer very naturally turns his attention to

Cows.——I have already mentioned, that in Derbyshire there are some good and some indifferent farmers; in nothing do they differ more than in their opinion about cows; and in no part of their farming perhaps (in point of advantage) are they so nearly equal. The original breed of cows in Derbyshire appears to have been inferior in many respects even to those of their neighbours. These, in many parts of the county, are still held in estimation; but when compared with the new improved breed, are far short in excellence of shape and qualities, both as to the flavour of their flesh, and the facility with which they are fatted. To bring the idea to the conception of those who have not seen the difference, let them imagine the most awkward, ill-shaped, plodding hack, of eight pounds value, compared with the highest bred blood horse, who for his pedigree and excellence is esteemed a national treasure. The fine blood horse, however, differs from the fine bred heifer in this essential point:—In old age the horse is worth nothing; but through life, and to the extreme of old age, the cow is, in the language of the breeder, in all *situations*, and under *every* circumstance, always fat. Those who are not willing to allow that the *breed* of cattle is all that is necessary to make them fat, will however always find, that wherever this well-bred heifer has that pasture which will maintain any other heifer decently, she will do better than the old coarse breed; and it is an undeniable fact, that in the pastures of Derbyshire the true bred heifer will be fat, and fit for the butcher, while her companion of the "old sort" is little more than skin and bone. Much praise is due to Mr. Bakewell of Leicestershire for his indefatigable attention to this part of rural economy. Others, however, that are not so universally known, are not without their merits;

nor have their endeavours been without success in point of public utility. In Oxfordshire there is an instance of excellence that cannot escape public notice; and in this county, it is a pleasing reflection, that men of much eminence for enterprize and public spirit, have carried their researches and improvements to a height that entitles them to great consideration among the breeders and improvers of stock; and what promises the greatest stability to their fame, is, that not only farmers, but men of the first independency are engaged in this laudable pursuit. Improvements in stock seem to me in the first instance to have gone down the throats of "Sitch as God sent;" and to have made its appearance in the fat and well favoured kine. Through the animal kingdom there are clear distinctions between the blooming healthy families, and the lean and ill-favoured;—between the nicely proportioned symmetry of bone and muscle, and the cross-made and disfigured animal of every species; perhaps a nice observance of these qualifications gave rise to a preference, so judiciously made by men of experience and skill. Though better soils, I apprehend, first produced these distinctions, discerned by men of skill, they produced the readiest sale and best prices at market; and we find originally that the Lancashire breed became eminent; the inhabitants of that district, perhaps, without being aware that they were liable to be rivalled, allowed their best breed to be picked by their more southern neighbours, who, more tenacious, for many years carried on the improvement, by what they affirm to be at this day a great secret, until they produced what is now called "the new breed;" some of which are endowed with a pedigree almost as long as that produced by Mr. Bannister in the character of Cadwallader—However, whatever merit there be in the pedigree, there certainly is intrinsic merit in this breed of animals; that they will fatten sooner than any other breed; and that there is less bone and offal about them than in any other sort of an equal size in the kingdom. They are easily distinguished, even in the dark, for there is a softness in the handling, that when contrasted with the common breed, is as different as the fine skin of the race horse to the coarse hide of a boar-stag. The merit of this breed of horned cattle, as grazers, I believe, in Leicestershire, Northamptonshire, Cheshire, and Lancashire, as well as most other grazing counties, stands uncontroverted. Besides the famous breed of cows in Derbyshire, we find others which not many years ago were held in great estimation, and among many of the old farmers are still esteemed (and perhaps very deservedly so) for the dairy. This cow is produced from crosses of the Lancashire, Warwickshire, and other breeds; and is what the Leicestershire breeders call the " old-fashioned sort." The merit of this " old sort" I am willing to bring to public view, by relating the following experiment, as it comes from a gentleman of unquestionable veracity:—that he has made seventeen pounds and a quarter of butter from a cow of this kind in seven days; that she was always healthy; but never shewed at any age much inclination to become fat; and that, at twelve years old, he sold her to the butcher at 12 pounds. This worthy gentleman goes on to remark, that nine Derbyshire cows of this breed were pastured with nine cows of the Holderness breed; the Holderness cows gave the greatest quantity of milk, but the milk of the Derbyshire cows was considerably more productive of butter and cheese.—I am sorry this gentleman has not favoured me with a comparison of the measure of milk, and weight of butter and cheese; an acquisition that would be highly gratifying, but must be left for marginal additions. The milch cows brought by the dealers to Derby market during the spring months, are chiefly of the Yorkshire kind, from the neighbourhood of Rotheram; this the Derbyshire farmers cross with a Derbyshire bull of the " old fashioned sort," but the decided preference due to the bull of the new Leicestershire breed, is likely to root out the old-fashioned sort entirely; and more especially as some of the breeders of this new sort fairly challenge any other breed of cows to equal them in profit to the dairy, and certainly will excel them in grazing. It is matter of much controversy among the farmers in Derbyshire, whether this new breed of cows can be made equally productive in the dairy with any other species, and retain their decided superiority as grazers. If this can be accomplished, even the new Leicestershire breeders will be astonished themselves, and yield the palm to the Derbyshire cow. So far as my own experience has gone, I confess this new breed of horned cattle may be called a new creation; but still more beneficial to the community would these new species of animals be, if the nutriment and fluids that pass through their organs could be directed into two channels at once, milk and flesh having hitherto been held to be incompatible. I believe the idea of their being incompatible is not altogether new, several unsuccessful attempts having been made some time ago. I intended to have annexed portraits of this breed; but understanding that there is to be a General Report on the different Breeds of Cattle in the Kingdom, beg leave to refer to that Report for further particulars. I shall conclude this description of the Derbyshire neat cattle with remarking, that I am told there are in the county of Derby, of this new breed, bulls that are deemed worth £300, and cows nearly that sum; to improve upon them, would perhaps be to put it out of the power of most men to enter upon a dairy farm; but in the High and Low Peaks, we find a useful little cow among the farmers and miners, which, with a small cross of the new Leicestershire breed, would in all probability suit their pasture better than even the highest breed we find in the Fertile Soil.

Sheep.——In the Fertile Soils we discover the new Leicestershire sheep more or less perfect, according as the goodness of land, the improvements and attention of the farmer, or other circumstances admit. These breeds of sheep seem to me to have had their rise from the same cause, and in the same way with the cows I have described; but as their origin and description belongs more immediately to the county of Leicester, and as I do not know of any particular improvement in them that this county is intitled to the merit of, I shall content myself with saying, that the wool of the shar-hog usually weighs between six and eight pounds; and to gain some idea of its value and goodness, when the finest short wools are worth 30s. per tod of 28lb. this usually brings about 24s.—The carcass is one continued pulp of fat, from the time of being lambed till it is slaughtered for the table, which is generally before, or soon after being two years and a half old: at this age, in Derbyshire, this sheep usually weighs from 30lb. to 40lb. per quarter, and is so fat, that a very moderate quantity of the mutton will satisfy the keenest appetite.—I wish I could say as much for the flavour of this mutton, as I can for that I tasted without bread at Hurdlow house, which was of the small-horned sheep I meet with in the High Peak, on the moors and more barren part of the county, where the farmer usually keeps them to the age of five years, at which time they become valuable for the parks and tables of the gentry of this and other counties. I am aware that the new Leicestershire mutton has its advocates, and that in some instances, those who give the preference to the smaller and older sheep, have been deceived at the table of their friend: but during the time I was in Derbyshire (though no epicure) I found no difficulty in distinguishing the flavour, and giving the preference to the aged small mutton; and therefore in this respect I am free to own, that the new breed of Leicestershire beef has an advantage over the new breed of Leicestershire mutton.

Taking a general view of the sheep in Derbyshire, from the most pure Leicestershire new breed, they gradually lessen in size and value down to the small, coarse, hairy-polled sheep; and in the mountainous part of the county, we find the size of the sheep proportioned to the quality of the land, and nature of the pasturage: on the commons, many of all sorts of breed, which I shall call foreigners, from their being sent to joist from different places; but in general, in the High Peak, they choose the close woolled hardy sheep, observing the closeness of the wool as a certain proof of their being more likely to stand the rainy seasons of this district; and indeed I am of opinion that they must improve their land before they can much improve their sheep. In a large district, near the source of the Derwent, I found considerable sheep farms in what is called the Woodlands (a term I think ill-applied, for I saw very little there); the breed seems calculated for the pasture; and in this instance I must beg the Leicestershire breeder will excuse me in differing from him in opinion, when he asserts that their sheep *are to be preferred, in all pastures, and all soils and situations whatever,* to any other that can be put into the same pasture with them—I think the size of the sheep, the quantity of its wool, the close texture of its fleece, and the shape of the animal being calculated to undergo the fatigue of searching for its food (which in some situations is absolutely necessary), are requisites which the new Leicestershire breed do not possess. I can assure him, that in travelling from Glossop to Derwent, I was overtaken by a sheep pursued by a dog; the sheep I suppose had strayed in quest of food (and where scarcity is, surely the sheep calculated to *search*, is preferable to that which is loaded and incapable of travelling): this animal I observed every now and then stopped to graze; the dog seemed not to understand perfectly his master's signals, who had placed himself on an eminence, as if to direct the chase; and for the space of half an hour this sheep was in my view, and certainly led the dog a dance of two miles. I do not say that this racing was necessary, but I will maintain that searching for food was next to self-preservation; and that perhaps this quick motion through the air might shake off the wet, and cause the fleece to dry sooner than it would have done if confined to one spot. And I would ask any Leicestershire breeder, how his sheep would have *shifted* in such a situation?

Horses.——The cattle used for the plough in the fertile part of Derbyshire, are chiefly brood mares, of the strong cart kind; and in general are excellent stock for breeding waggon and dray horses, which are in such request in every part of the kingdom. The opportunity a dairy farmer has of laying brood mares in pastures, and keeping a sufficient number to do the work, and occasionally rest, seems to me an advantage, by which he may avoid the exorbitant expence of horses in the stable feeding on hay and corn to go to plough.

The introduction of brood mares to do the work, seems to me one cause why we find no oxen employed in tilling the soil; and in brood mares, great improvements have certainly been made, and I trust will continue to go on, from the conveniency of the pastures, and the fair field they open for extending and improving the breed of draught horses. Mr. Bakewell's stallions are heard of, but not half so much as the show of Leicestershire rams and bulls. In the mountainous part of the county, we find a nimble, lighter animal, which has always been habituated to travel over rocks and precipices, and draw in a little cart, or carry a kind of pannier on its back; and what I said of the Peak sheep, I am ready to say of the Peak draught horse—improve the soil, and then you may improve this species of animals; for I am of opinion, that larger and better horses would require better keep, and better roads to travel upon, than what the Peak in its present state affords.

Hogs.——As a dairy country, it may be supposed to abound with hogs—In every dairy farm we find a very good stock of hogs, and of a very good sort; such as in the southern part of the kingdom are known by the appellation of the Berkshire breed. The management of the dairy being well understood by the mistress of a Derbyshire farmer's family, she does not neglect her hogs; and we find that from the breeding and improving of hogs, a profit of from twenty to five-and-twenty shillings is made from each cow, by the maintenance of hogs from the offal of the dairy.

IRRIGATION.

The situation of this county, consisting of hill and vale, may naturally be supposed to present us with great improvements by flooding the land—That it has been practised long ago, and that less is done now than formerly, is observable in many parts of this district. Taking the general sense of the occupiers of land, they are not very fond of it. The still brooks that empty themselves into the Dove, have been converted to this purpose in several places. But the Answers to Queries dispersed in this neighbourhood are not in its favour; the bad effect being by some (very properly) attributed to letting the water remain too long upon the land: from others I received the following answer to that query: "What little has been tried, no advantage has been received." The coal and minerals of Derbyshire, are certainly strong reasons for the water not fertilizing the land;—that irrigation increases the verdant appearance of the mead, and the bulk of its crop, is an uncontroverted fact, but in many places, as well as in Derbyshire, its effects as an improver of the soil become extremely problematic.

My own opinion has always been, that in flat meadow grounds, where a running stream is applied, in process of time it changes the nature of the grasses, substituting the coarser sorts. The situation where the most benefit may be expected, is the declivity of a hill, where a small quantity of water may be diverted over a great surface, and readily taken off; more especially where the water is impregnated with the drainings of a town, village, or even farm-yard. Rapid washings with clear water, will certainly fill the pores of the earth with moisture; but I find some difficulty in believing that the surface of the meadow scoured with a clear rapid stream, can add to the staple, or improve the soil as a manure—A deposite seems the more likely method to improve; and I am sure that wherever the small deposite of a clear river is of a chalybeate nature, the growth of the plants gains nothing by the bargain. Perhaps it is owing to this that the finer grasses, whose roots spread nearer the surface, are obliged to give way to the coarser sorts, whose roots running deeper in the earth, escape the poison, and gain an ascendancy over those that are more immediately exposed to its influence.

That a considerable part of Derbyshire may be watered, is true, but I should strongly recommend the examination of the nature of the water, before it be attempted on a large scale.

THE GRAINS PRINCIPALLY CULTIVATED.

By reference to the rotation of crops, mentioned under the head,—*How the Land is employed.* it will appear, that in the district denominated Fertile, wheat, barley, oats, and beans, are the sorts of grain principally cultivated—In the Low Peak, barley, pease, oats—And in the High Peak, chiefly oats. In all of these, however, mixtures of others are also tried. We discover vetches, lentils, potatoes, and cabbages. At Bretby, the gardens which formerly poured on the tables of their illustrious possessors all the profusion which the soil and climate were capable of producing, are now employed in raising the seed of cabbages; a sort (of the York species) that has been cultivated there with great success for many years, and is remarkable for its size and durability in the winter.

Potatoes being more eminently a Lancashire produce, it might be deemed tautology to say any thing here of their cultivation: I shall only mention them, in order to give room for marginal observations, if any improvements have occurred to any of my readers in the county of Derby. But finding in Chesterfield, and some of the adjoining parishes, particularly in that of North Wingfield, in that district which I denominate the Low Peak, many acres planted with

Chamomile,——and conceiving it not usually cultivated as a field crop, I shall begin with observing, that a loamy soil is chosen for this purpose; that after the ground is well prepared by thorough cleanings (which however is not always practised), about the end of March, the roots of an old plantation are taken up, and divided into small slips, which are planted in rows about eighteen inches asunder, and about the same distance in the rows. The plants are kept clean by frequent hoeing and weeding with the hand. In September, the flowers are fit to gather; their perfection depends upon their being fully blown, without having stood so long as to lose their whiteness; the flowering continues till stopped by the frosts. The gatherings are repeated as often as a succession of flowers appears; this depends very much upon the season, dry years furnishing more, and wet or dull weather fewer successions of flowers. When gathered, they are carefully dried, either in kilns very moderately heated, or on the floors of boarded rooms, heated by slow fires; the object is to keep the flowers white and whole; and this is done only by drying them as slowly as possible. The produce varies from two hundred weight, or even less, to four, five, and in some (though as I have learned but in few instances) to six hundred weight per acre: the price has also varied from 40s. to £7 per cwt. From the best accounts I have been able to obtain, four cwt. at £4 per cwt. may be considered as the average produce and price. The plants usually stand three years, of which the first affords the smallest, and the second the best and greatest produce. Sometimes the same plants are continued beyond three years, but the ground gets foul, and the flowers are weak and bad. The flowers when dried are packed in bags, and bought up by persons in the neighbourhood; by whom they are sold principally to the druggists in London. Some persons have used them in brewing, as a succedaneum for hops; and others contrive to mix them with hops. I am informed they will not answer the end, and that few people approve the taste, even when mixed. From the information given me, I apprehend that about two hundred acres of land here are employed in the cultivation of this plant.

Fallowing.——From what has been said, the Board will perceive that fallowing is practised in Derbyshire, and I am proud to add, by the very best practical farmers. Green crops, such as vetches, clover, cabbages, coleseed, and turnips are, no doubt, substituted, with additional ploughings, in lieu of fallows in many parts of the kingdom, particularly in the neighbourhood of great towns, post roads, or wherever what I call foreign manures (such as are brought into a farm over and above that which annually renews from the produce) are procured; yet even in this situation land may be over cropped and rendered unfruitful, for want of clean fallowing and rest. Although this may not appear at first sight, yet so far as my experience goes, sooner or later the land will be reduced to that state of weakness and imbecility, in which no manure, no hasty stimulus, or drunken dressing, nor green crop, will enable it to sustain and perfect a beneficial crop of grain. Manure and green crops, it is true, will produce a crop of straw, but for want of that vegetable aliment, which can only be restored by fallowing and rest, the crop of grain will ever fall short of that farina, which is the life and soul of all white crops. I am aware that the advocates for exploding fallows will say, why do you dress your land so much; you must crop it oftener, for the land is too rank. Follow their notion, and you will find your system of husbandry reduced to such a narrow basis, between weeds and straw, that fifty to one the crop will fall a sacrifice to the one or the other; if it has the good fortune to escape the calamity of being laid, from the happy circumstance of a dry season, it then has to struggle with the chance of being over-run with such weeds as are not checked by drought, and frequently, instead of a crop of wheat, you reap wild oats. I know some land whose management is within my own observation, and that for the last 20 years has not been rested more than one year at a time, under clover, and never experienced a clean summer fallow; the land in my eye was last year sown with wheat, after a very abundant crop of vetches mown green for horses. The crop at this time is in swarths for hay, for instead of a crop of wheat, there is four to one wild oats; and yet together the wheat and wild oats are sufficiently prolific to yield after the rate of two truss bound load of hay to an acre. So rooted, however, is the occupier of this land (who by the by is also the owner) in his aversion to clean fallows and rest, that he is not to be persuaded from immediately sowing it with turnips, and next spring, if the turnips are good and eat off in time, in all probability will again sow it with wheat, confident that it is so full of dressing, it wants nothing but cropping.

In the poorer soils, it is extremely difficult (and consequently very rare) to bring them into this state of imbecility; but in lands by nature prolific I am persuaded it will happen. And turning our eye to the most prolific soils of eastern countries, even the land of Judea, when its cultivation was in the greatest perfection, the legislator commanded the husbandman to cause the land to enjoy its sabbaths.

IMPLEMENTS IN HUSBANDRY.

Ploughs.——Of this instrument in Derbyshire they use several sorts; the double plough, mounted on wheels, performing two furrows at once, drawn by three, four, and sometimes five or six horses at length in the furrow.—This instrument, when well made, performs very well, but wherever it requires four or more horses, and a driver, the only advantage I discovered was to the ploughman, for in ploughing two acres, he walks only that length of ground which the ploughman, with the single plough, does in ploughing one acre. When I saw its performance with four horses and two men, and viewed the nature of the soil, I was struck with the idea, that two of the Norfolk wheel-ploughs, two horses, and without a driver, would perform more work with the same powers, and more ease to the horses; and I believe most of the farmers that use this plough will admit, that two ploughs, with two horses in a plough, will perform more labour, and with more ease to the horses, than four horses in one of these ploughs. But they say, that for two ploughs, two drivers are requisite, and here they do with one; the advantage is gained, and the disadvantage vanishes whenever they may adopt the Norfolk plough, and manner of ploughing.—The single plough, with two wheels, is used here; is well made, and performs the operation well: they make them still lighter, with only one wheel:—but the plough most commonly in use, is that of which I am favoured with the drawing (Fig. I.), sent to me by the liberality of Mr. Roe, the drawing-master of the public school at Repton, being the performance of one of his pupils in that famous seminary of learning. —This simple instrument is easily procured, and in most cases performs very well. But I cannot help suggesting, that wherever this instrument will perform with two horses and a driver, I think the Norfolk plough would perform equally well, and save the expence of a boy.

Harrows.——They have the common light harrows, made lighter or heavier according to the nature of the soil, and generally coupled together, each horse drawing his own harrow in the usual way; but in the Peak I saw a practice of drawing two harrows with two horses at length, and the man leading the foremost—the awkwardness and absurdity of this practice, even the man himself readily owned; but added,—"it is what we are use to."

Carts and Waggons,——on the common construction, are in use all over the county—In the mountainous part, they have a light little cart, drawn by one horse; and here we plainly discover the advantage of small carts, where one man going to the coal-pits with four, five, and perhaps seven or eight of these little carts, and one horse to each, will certainly bring away more weight, with less friction, and more facility, than the same number of horses could draw in one waggon. During my Tour, I did not discover any instrument that is not common—the cradle scythe used in Hertfordshire, of which I have given drawings (Fig. II.), I think would be an acquisition to many farmers in Derbyshire. The cradle costs two shillings, and may be mounted on the grass scythe which is in common use in the county of Derby.

OF HORSES AND OXEN.

The dairy farmers seldom plough much, and consequently have less to do with either horses or oxen; but even the dairy farmer, that is alternately breaking up and laying down his artificial pastures, and improving his farm, finds considerable employment for draught cattle. This in Derbyshire, as I have already observed, is performed, I believe, entirely with horses; for I do not recollect to have seen or heard of any teams of oxen used by farmers—Their brood mares, of the draught kind, form their teams; and in a dairy country, I am persuaded, are well calculated to breed the strong draught gelding, so much wanted in every part of the kingdom. Suppose the work of a farm sufficient to employ four horses; instead of four, the dairy farmer keeps eight, and works them alternately: his eight mares, lodged continually in his pastures and yards, with very little corn, will do the work of four horses, or of six bullocks, and rear him five or six colts; —these colts, at 12 months old, are sold from 12 to 18 pounds each; if so, this nearly repays the expence of keeping the beasts of draught necessary for the farm, and gives the farmer the advantage of occasionally working an extra team; which in critical times, on sowing turnips, and in harvest, I consider essential. To have it in his power to sow all his turnips while the land is in a proper state of moisture;—to carry all his hay while the sun shines;—to cart all his corn during the fine weather; and at all times, as it were, to be master of his work, gives such a decided advantage to the farmer, as in my opinion sufficiently counterbalances any extra expence that may be incurred by keeping one or two additional brood mares in his pastures; and this advantage I think easier obtained by keeping brood mares of the cart kind, and at less expence than by keeping oxen, or any other species of animals for draught.

SEED TIME AND HARVEST.

The best farmers usually sow beans and oats in February; barley in March; and wheat in the beginning of October; if the season permits them so to do, their crops will be ready to cut in August and beginning of September, in the ordinary course of seasons; but this varies with the variety of seasons. The more northern and mountainous part of the county, is considerably later than the Fertile Soil in the southern district—I saw in the High Peak the farmers sowing both oats and barley in the second week in May; although on entering the county near Ashby, on the 22d of April, I found all those farmers who were masters of their work had then finished sowing.

INCLOSURES AND COMMONS.

Within the last 15 years, I believe that above one-fourth part of the whole county of Derby has been inclosed—the two districts which I have denominated Fertile and Low Peak, are almost entirely inclosed. The High Peak remains a field, in many places, for that improvement. The advantages arising from inclosing are very great, both to the owner and the community; the advantage to the owner being in some measure governed by the nature of the soil, the quantity of waste, and expence that attends the inclosure and making the roads. Some inclosures within the last 15 years, I have been told, have nearly doubled the rental. Immediately on being inclosed, the rents advance between a third and a fifth. The increase of the corn does not seem to be in this proportion, for usually on being inclosed much of the land is laid down under artificial grasses, less ploughed, fewer fallows are made, and more of green crops are introduced into the system of husbandry. The quantity of the general produce, however, certainly increases in a greater proportion than the rent; for by inclosing, the capital employed by the farmer is considerably increased, and I think it demonstrable, that the more capital a farmer employs in the management of his farm, the greater quantity of produce he carries to market for the use of the community. The stock on an inclosed farm undoubtedly improves; for no longer subject to the customs of the place, every farmer is at liberty to consult his own judgment in the improvement of his cattle; and experience shews, that the stock in the inclosures is generally better than that in the common fields. The nature and size of the inclosures seem to be well understood by the men who have been employed; in general, they have very judiciously adapted the size of the field to the size of the farm; and if I might be allowed to offer a hint for future inclosures, it would be, to consult as much as possible the nature of the soil, and to place the fences as near as may be on the spot where the nature of the soil changes.—I know it cannot always be done; but I certainly should recommend the sacrificing of a straight hedge, to attain the acquisition of having the soil in each field of one nature, or as nearly so as it is possible to attain that point: many farms labour under inconveniences in this respect; for where a field of twenty acres consists of soil fit to graze, and soil only capable of rearing young stock, the disadvantage must be apparent to every one; and in arable fields the disadvantage is still greater, for the culture and cropping that succeeds best on clay, is not by any means the best that can be adopted on a gravel.

POPULATION.

Those who have urged the impolicy of inclosures, from the idea that they depopulate, must have taken up the matter on very superficial grounds——Ask any man if the planting, preserving, and rearing of hedges, is not attended with much expence; and if, even after they are reared, whether the cutting, scouring, and keeping them up, does not require much attention and increase of labour? The dressing and keeping an inclosed field in a proper state of cultivation and improvement, is certainly equal to what is done in the common fields. In a word, I think no man will contend for a moment, that to cultivate and improve land after it is inclosed, requires less labour than it did in the common field state; nor that men will do more labour in a day than what was formerly done. If my position be right, it will follow, that the number of hands employed cannot be diminished. I know there are places where common arable fields have been inclosed, laid down in pasture, and neglected; less ploughing done, and perhaps fewer labourers employed, after the inclosure; but this very rarely happens, for wherever inclosures are turned to the most advantage, I will contend they require an increase of capital, attention, and labour; and consequently that the number of labouring hands are not diminished. So far as my experience goes, inclosing in the first instance requires an increase of capital to be employed in agriculture; this capital renders the product of the land more abundant, and this abundance requires more hands to be employed. By the facility with which abundant produce is managed on inclosed lands, the additional capital employed makes its returns, so that there are more hands required, and more produce carried to market.

In regard to the population of Derbyshire, I believe it is very much increased; but this can only be ascertained by more local knowledge than what my time on this occasion could possibly furnish. As this, however, is so important a subject of inquiry, I thought the Board would wish to have some idea respecting it: in the Appendix, therefore, I have given the information which Mr. Pilkington of Derby had collected in 1788, extracted from his History of Derbyshire, published in 1789. By that Abstract it appears, that the number of houses then amounted to 25,642 (by some mistake stated in Vol. II. p. 49, at 25,206, perhaps owing to some confusion between houses and families). He counted the number of houses in every parish; and in about 30 parishes he ascertained the number of inhabitants. By the proportion between the houses and the inhabitants, in the parishes where he counted both, the inhabitants amounted to 49,379, or nearly 5 to a house. He states that in 1788, the total number of inhabitants in the county was 124,465. In his account, Mr. Pilkington reckons the number of houses in the parish of South Wingfield to be 127; and by his mode of reasoning, the number of inhabitants will be about 630.—I believe population to be increasing very fast in Derbyshire, from the number of inclosures, and extent of trade and manufactures; and think this parish of South Wingfield to be a medium for the county, especially as it was inclosed in 1786. I find an exact account taken by Mr. Blore (who seems well qualified to give a most excellent and valuable History of Derbyshire, in which at this time he is laudably engaged): in 1792, he makes the number of houses in South Wingfield to be 165, and of inhabitants 769.

Having every reason to be satisfied that both these accounts are correct, and following the three grand divisions of the soil, I find that what I have called the Fertile part of the county, contains about

what I have called the Fertile part of the county, contains about -	Acres 213,120
What I call the Low Peak land, contains about -	231,680
And what I call the High Peak land, contains about - - - - -	275,840
Making the whole county about	720,640

The general State of Population, collected from these materials, will therefore stand

District.	Statute acres.	Population from Pilkington, in 1788.		Population from Blore, in 1792.		Population and average acres to each house, and to each individual, supposing the increase that happened in 4 years, in the parish of South Wingfield, to hold good in every part of the county.				Increase from 1788 to 1794.	
		Houses.	Inhabitants.	Houses.	Inhabitants.	Houses.	Inhabitants.	Acres to each house.	Acres to each person.	Houses.	Inhabitants.
								A. R. P.	A. R. P.		
Fertile Soil -	213,120	7,125	35,182	9,256	43,138	10,321	47,116	21 0 0	4 2 3	3,196	11,934
Low Peak Soil	231,680	9,734	48,065	12,646	58,938	14,102	64,374	16 1 28	3 2 15	4,368	16,309
High Peak Soil	275,840	8,783	43,369	11,411	53,182	12,725	58,088	21 2 28	4 2 1	3,942	14,719
Total - -	720,640	25,642	126,616	33,313	155,258	37,148	169,578			11,506	42,962

If we deduct one-eighth part for roads, rivers, wastes, woods, and hedges, in the Fertile and Low Peak districts, and two-third parts of the High Peak, for wastes and unprofitable lands, which it is believed is about the fair proportion, it makes the heaths, wastes, moors, woods, roads, rivers, and lands, not employed in husbandry, to consist of about 239,492 acres (nearly one-third of the whole), leaving 481,148 acres for arable and pasture; of which not more than one-fifth part is annually cropped with corn, the four-fifths being either old sward, or artificial grasses; hence the convertible land is reduced to something less than three acres for the support of each inhabitant; and as they are so rapidly on the increase, it leaves but little room to suppose the price of provision will fall; on the contrary, when we consider the number of animals of burden, and those kept for pleasure, I think we may fairly conclude, that the price of provision is likely to rise: for by this state of population, and the extensive wastes in the High Peak, this county does not appear to be in a sufficient state of cultivation to support its inhabitants, and much less to carry any corn to a foreign market; indeed, cheese, and a few colts, seem to be the only commodities which the farmers send out of their county.

From what has been said on inclosures and population, it is evident that many advantages arise from this practice; and consequently where there are open fields and waste grounds, propositions for inclosing have in most places been made, and in some places are at this time carrying into effect; and that where inclosures have not been made, it only waits the concurrence of the individual owners, which time may reasonably be expected to produce.

WAGES,—PRICE OF LABOUR,—AND HOURS OF WORKING.

Derbyshire abounding with mines and manufactures, the labouring hands find other employment beside agriculture; consequently the price of labour to the farmer fluctuates according to the briskness or stagnation of trade, and the different demands for the produce of the mines.—The most general prices seem,

Labourers from Candlemas to Martinmas—1 *s.* 4 *d.* to 1 *s.* 6 *d.* per day: hours of work from six to six. From Martinmas to Candlemas, 1*s.* 2*d.* per day, working from daylight till dark.

Near market-towns the wages are from 1*s.* 6*d.* to 2*s.* per day; between Derby and Ashborn, from Lady-day to Midsummer, the wages are from 1 *s.* 6 *d.* to 2 *s.* per day; from Midsummer to Michaelmas, from 2*s.* to 2*s.* 6*d.* per day; and from Michaelmas to Lady-day, 1 *s.* 4 *d.* to 1*s.* 8 *d.* In the harvest month, beer is always added to the above wages; and the hours of working, early and late, as the dews will admit. Reaping wheat, 8 *s.* per acre; oats, 5 *s.* per acre; mowing barley, 2 *s.*; grass, 2 *s.* 6 *d.*; threshing wheat, 2*s.* 8*d.* per quarter; barley, 1*s.* 8*d.*; oats, 1*s.*

It is not unusual for a farmer to find the labourer his board; where this is done the hours of working are the same as above stated; and the price of labour is,

From Lady-day to Midsummer, 5*s.* per week; from Midsummer to Michaelmas, 8*s.* (always 9 *s.* in harvest); from Michaelmas to Lady-day, 4*s.*

Hired Servants.——The best man-servant from ten to twelve guineas a year; a woman from four to five guineas.

Throughout the county, among the lower class of farmers, much praise is due to the master for his affability and attention to the labourers he employs: nothing is more common than to see them rising from the same frugal board, and saying to each other, come, let *us* go to such a job. Nor is this meant to the disadvantage of the more opulent occupier of lands.—In all well managed farms, the intelligent and humane master provides with equal assiduity for the comfort and support of his faithful and industrious labourer; so that throughout the county, if there is want of either labour or comfort in the cottage, it generally arises from want of industry or good morals in the cottager. Discontent seemed to me to be most prevalent among the manufacturers, who have the highest wages, a large proportion of which is laid out for beer, or more pernicious liquors; and I believe it is usually found that the seeds of discontent meet with the richest soil in the increased population consequent on manufactures. The demagogues of the day find this the scene for action, and are extremely active; they often fix upon the most ingenious artificers as tools to disseminate their pernicious principles—hence it becomes the indispensable duty of the master of such men, to endeavour to influence their morals by public as well as private example——Woe must await that nation where both masters and servants become immoral and dissatisfied. And any pretext for licentious conduct is eagerly urged by those, who vainly flatter themselves that general confusion is the road which will lead them to power; and is as readily adopted by the profligate, who supposes he may seize in a scramble that which he has not virtue or patience to acquire by industry.

DRAINS AND DRAINAGE.

This district, consisting of mineral stratas, immense mountains, and deep vallies, may well be supposed to consist of innumerable springs, which, in good husbandry, require the application of drains; and this the natives call *sougbing*. Much attention is paid to this improvement by every intelligent farmer; and the drain adopted is according to the nature of the soil, and materials fittest and readiest for the purpose—Stone being superabundant in almost every part of this county, and well calculated for drains, they are generally made of that material, and in their construction the most rational method attempted for duration and service; this, however, varies according to the nature of the soil, and the hardness of the stone; but every other method seems to bend to that practised by Mr. Elkington, whose practice is becoming every day more extensive, and seems to me the most effectual of all others for carrying off subterraneous waters.—He lays a stone drain, from three to six feet below the surface, in such a direction as to cut the source of the spring, and with such a declivity as to scour itself; wherever he finds the source of the spring below the level of his drain, he bores, and with such judgment, that to a stranger his auger seems possessed of the virtue of that rod with which Moses struck the rock, for the water immediately gushes out, and perhaps lays land, that before was too wet to carry a sheep, sufficiently dry to carry the heaviest ox. This method certainly is effectual against springs; but a single drain, and that perhaps at a considerable distance from the land in want of drainage, cannot be supposed to carry off the surface wet occasioned by rains, which sometimes remains till it filters through the soil down to the spring where Mr. Elkington bored—this in some instances produces stagnant water on the surface; and, in my opinion, if the Northamptonshire draining-plough (of which I have given a drawing, Fig. III. and which the practical farmer will easily be able to adopt, by only adding an upright fin to the share of his own plough) were applied to the surface of such land in the winter, the furrow turned in on the approach of spring, or burnt or rotted for a manure, as the nature of the soil may point out, it would be found of service in many situations.

PARING AND BURNING

Has been adopted in many parts of this county, and is now practised with various success, but in general is rather wearing into disrepute. Meaning hereafter (conformable to the instructions of the Board) to take the liberty of giving a few thoughts on the Means of Improvement, I shall reserve my observations on this system for that opportunity.

TIMBER, WOODS AND PLANTATIONS.

A great part of those districts which I have denominated Fertile and Low Peak, are wooded, and well calculated for the production of timber.—Kedleston park stands unrivalled in the county for timber and plantations; and is a striking instance that even the best pasture land may be planted without diminution of the rental of a family estate. In general through the county, timber though small, is valuable; but from the plenty of coal and wood for fuel, will not answer for cultivation. However, the ingenuity of the natives renders the stub of the ash, the hazle, the sallow, and other shrubs, of more value here than in the southern counties where they are cultivated for fuel; and many parts of this county send tools made from these shrubs into counties where they are more plentiful.—The mines render every piece of timber, though ever so insignificant in itself, truly valuable; and those who do not sacrifice every thing to immediate convenience, very laudably attend the increase and improvement of their woods, by regular falls, and keeping up a succession.—But generally speaking, the quantity of timber and woods are upon the decrease: land becoming more valuable than formerly for corn or pasture, every one is engaged in rooting up all those brambles, thorns, and bushes, which are the natural guardians of the oak, the ash, and the elm in their infant state; and too little attention (as I shall hereafter shew) is paid to the propagation of timber, on land which by nature is incapable of any other improvement.

PRICE OF PROVISIONS.

From the number of inhabitants, the quantity of unprofitable soil, and the numerous manufactures carried on in this midland part of the kingdom,—provision in general is full as dear, and in the article of corn, dearer than in the metropolis:—without some means be discovered to keep up the increase of food with the increase of its consumption, in consequence of additional population, I think we may reasonably expect that the price of provision is more likely to rise than to fall. The new breed of cattle, which certainly requires less time, and consequently less food to fat them, is no doubt the only rational mode by which we are enabled to account for butchers' meat not being, with regard to price, in the same predicament with corn—To enumerate the prices would be to give a return of the different markets in the year, and which will, in all probability, vary every succeeding market.

STATE OF THE ROADS.

In the lime-stone diſtricts of this county, the materials are of that durable nature, that in general both the public and parochial roads are good, except on those steep ascents where access is made difficult. The manufacturers having found good roads essentially necessary, we find great attention has of late years been paid to their improvement; but in many of the parochial and bye-roads, a traveller is easily convinced that all the statute duty enjoined by the existing laws is not punctually performed—A due attention to this, when we consider the plenty of materials, would certainly render them in a better state than the present. Perhaps the small quantity of corn the farmer has to draw to market, renders it of less consequence to the natives—a bullock, a sheep, or a horse, will travel where it would be difficult for a cart or a waggon.

STATE OF THE BUILDINGS AND FARM OFFICES.

In the new inclosed and fertile parts of the county, where improvements have been properly carried on, we find some very convenient and well adapted buildings; in others, where the old buildings are made shift with, they are mean and inconvenient. Materials for building in this county, especially the lime and stone, are no where to be excelled; and when I inform the Board of Agriculture that every necessary building for a farm of £200 a year may be erected new from the ground for about £500; and that those buildings properly executed, from the goodness of the materials, are a trifling expence when compared with the cost of repairs on estates in general; I think that to be deficient in those conveniences which are essential to the best management of a farm in Derbyshire, is a wilful neglect, which a stranger does not easily find an excuse for in a Derbyshire gentleman. That these conveniences are wanting in some places, must however be acknowledged. During my Tour, I met with a farm-house and offices entirely new; and finding it to correspond with my ideas of a compact, well contrived, convenient plan, substantial, and not superfluously expensive, I made a sketch (Fig. IV.) of the various buildings, and the manner in which they are arranged.

Of the house.—1. The bakehouse, brewhouse, and washhouse, in which are coppers fixed, cheese-press, and necessary utensils for the work of the dairy.
2. The kitchen or dwelling-room.
3. The stair-case, in which there is a door under the landing that leads to the cellar under the parlour, which is a boarded floor.
4. The parlour.
5. The pantry, to which you descend by three steps.
6. The dairy, shaded by shrubs in the garden, to which there is likewise a descent of three steps.

Over the kitchen is the family sleeping-room; over the parlour a spare room; over the dairy (which has a lean-to roof) is the maid-servants' room; over the bakehouse, the farmer's daughters; and beyond their room, near to the stables, the farmer's sons; beyond which, over the stables, the farmer's men, whose room communicates with the stables by a ladder, and with the farmer's sons' room door, which allows the son to examine the stables, and is found very convenient where there are brood mares; and beyond the men's room, over the stables, the cheese-chamber. The staircase communicates with a passage to the daughters' room, the maids' room, and the sons' room.

Of the stables.—It is divided into stalls and conveniences for the brood mares, with hay-binns, &c.

Of the cowhouse.—1. The stalls for 16 cows.

2. Passages for feeding them over a four-foot wall.

3. Cribs of plaster for feeding the cows.

4. House for weaning calves.

Of the hogsties.—1. Cotes; over which are the hen-roosts.

2. Feeding yards, furnished with hoppers in the fence for the wash and food.

Of the barns and sheds.—The barn is a plaster floor; the walls and roof are furnished with air-holes, and loop-hole doors, to receive the corn.

The whole is finished with substantial brick-walls and tiled roofs; and in point of execution, bids fair not to cost £5 in repairing, if no accident happens, for 20 years to come.

LEASES.

The largest estates in this county are without leases; and in general leases are wearing out of use. On some estates of considerable extent in the High Peak, I found a printed lease, where nothing remains but for the steward to fill up quantities and names.—By these leases, the tenant enters upon all the arable and meadow grounds from the 13th of February, and upon all the pastures from the 5th of April, except a specified close, which the way-going tenant has for foddering his cattle in, under the name of a boosey pasture; and this boosey pasture, with the house, buildings, yards, orchards, and every other part of the premises, the way-going tenant surrenders to his successor on the 12th of May. The term is generally for 21 years; and the rent made payable in half-yearly payments, at Lady-day and Michaelmas—The usual custom is, that at Michaelmas they pay to Lady-day, and at Lady-day to the preceding Michaelmas. The tenant covenants to do suit and service at the lord's court, mulcture at his mill; to pay all tithes and taxes, except land-tax, to do all repairs, having stone provided in the quarry, and tinsel crop for fencing, to plant upon every acre in length (by which is understood the side of a square acre) three oaks or trees, the landlord finding the plant;—to manure the premises with the produce; he is not allowed to plough more than one-third of the arable land, having the other two-thirds under artificial grasses; not to plough any of the old meadows under the advanced rent of £5 an acre; not to take more than two crops of the same grain in succession; that for every acre he may break up of the artificial pastures, he shall lay down any equal quantity of the land under tillage, with six pounds of clover, and twenty-four bushels of hay-seeds; not to lop or destroy any timber: not to underlet; to preserve game; to serve offices incident to the farm; to keep a dog for the landlord; to give notice of poachers, and to bring actions against them, on being indemnified by the landlord. The landlord enters into the usual covenant to defend the tenant in quiet possession; and usually reserves a power to enter upon any quantity under one acre, on any part of the farm, on abating six-pence for every 64 square yards; and this with a view to build upon, or to accommodate manufacturers with the natural advantages this country every where holds out, of searching for mines, or erecting mills.

As I am of opinion that leases and the nature of their covenants are essential to improvement, on which I shall hereafter have occasion to speak, till then I beg leave to dismiss this subject.

COMMERCE AND MANUFACTURES.

In the course of my investigation of the present State of Agriculture in this county, I have frequently had occasion to mention that commerce and manufactures are carried to a considerable extent; of their influence on agriculture, I have had occasion to hint that, where the occupation of the soil falls into men's hands engaged in other pursuits, we see the land neglected, and a want of that scientific knowledge in husbandry, which they have attained in manufactures.—But when agriculture and manufactures are considered as separate and distinct sciences, and carried on as such, they assume their true characters of sister-twins, and are fostered by and fostering to each other;—the manufacturer buys from and pays the farmer for his food; and the farmer buys from and pays the manufacturer for his goods, and enables him to export his manufacture; the abundance of the farmer's crop finds a ready market in the manufacturing town; and the manufacturing town finds itself well supplied, and enabled to rival foreign markets, by the abundance of the farmer's crop.—Such must ever be the case where wise regulations between agriculture and manufacture prevail; —if wild schemes are pursued that ruin either, they generally ruin both. But to discuss the question, whether the poors rates and taxes which the land has to pay for the support and protection of trade,—whether our wars are provoked by our ambition to extend commerce, our impatience of controll and irritability at any thing like to competition,—or whether they are only entered into for the protection of the land; are disquisitions to which I confess myself unequal; one circumstance, however, struck me in this Tour, that the greater the extent of trade and commerce was at any place, the more valuable the land, the higher the price of provision, and, as it were, the more all matters depended upon the extent and stability of that trade (a thing extremely problematical, where it consists in the manufacture of raw materials which we import, and have to search for foreign markets for its sale when manufactured); consequently every thing, which even trade herself, with all her inviting accomplishments, could render desirable, became more and more doubtful in proportion to the extent of, and dependance upon the trade; and in some places so much so, as to render even the peaceable existence of the natives uncertain. From hence it may be inferred, how much depends upon our trade and commerce, and how tenacious we ought to be in the mutual support between agriculture and manufacture. Having, as I humbly conceive, thus far impartially stated to the Board of Agriculture what may be considered a Syllabus of the present State of Agriculture in Derbyshire, with the occasional Remarks that occurred, I shall now proceed to my second head proposed, under which I shall give

MISCELLANEOUS REMARKS.

I found no agricultural society established in this district, except I may be allowed to apply that appellation to a laudable meeting, occasionally held among a few gentlemen in the neighbourhood of Derby, at seasons when they wish to examine the excellence of their live stock, to associate, inform, and vie with each other in the management of their domains; but even this institution I could not learn had ever exceeded a family visit. Reasoning upon the exports and imports of the county, and the superabundance of produce, the little time I was in the county, I could only learn that cheese was the chief, if not the only article of provision which the natives can spare out of their own county; and thinking the Derbyshire cheese very good, I have collected the manner of making it in three different dairies.—

In the first dairy, the mistress says, the colder the milk is when put together for making cheese, the better; that when she finds it sufficiently cold, she puts a sufficient quantity of rennet to make it "come" in an hour; it is then stirred or broke down with the hand very small, and left to settle about half an hour; then the whey is got from the curd as much as possible, and gathered into a firm state in the cheese-pan; then a vat is placed over the pan, and the curd broke *slightly* into it; it is then pressed by the hand in the vat over the pan, whilst any crushings will run from it (the more it is crushed the better); a small quantity of the curd is then cut off round the edge of the vat, and broke small in the middle of the cheese; and after a little more pressing it is turned in the vat, and the same method of cutting the edge off is again observed; afterwards a clean dry cloth is put under and over the cheese in the vat, and it is put in press for one hour;

then it is again turned in the vat, and pressed ten hours, when it is taken out, and salted on both sides (a cheese of twelve pounds will require a large handful of salt on each side); it is then put in the vat, wrapped in another clean dry cloth, returned to the press, and kept there two or three days, turning it every ten or twelve hours; the last time it is turned, it is put into a dry vat without a cloth, to take away any impressions.

This dairy woman's cheese never heaves, but is in general dry, sound cheese, and is in perfection at a year and a half or two years old.

The second dairy woman pursues the same mode as the first, till the breaking the curd in the vat, which the first does *slightly*, but she breaks it very much (otherwise she says the cheese is subject to be unsound); in crushing it over the pan, they make use of a thick board of a half circular form, which covers half the vat; they kneel upon the board and press the other side by hand, frequently changing the board from one side to the other; she presses it in this manner very much, but does not cut the edges off round the vat; she has a cloth under it in the vat from the beginning, and turns it once in making. After being in press about an hour, she puts it into clean water, rather warmer than new milk, wrapped up in the cloth it was made in; it remains in the water about three hours (she thinks water is better than whey for scalding, it making the cheese milder); it is then put in press again for an hour, and a dry clean cloth is then put to it, and it is pressed for another hour; then salted and put in press again; she always presses them two days, and turns them every twelve hours; the last twelve hours they are pressed in a vat without a cloth, to take away any impressions; she always uses a tin girth, which she puts round the inside of the vat, to prevent the cheese from being pressed over the edge of the vat; when the cheese is in the chamber, it is turned every day for a fortnight or three weeks; after that time, once in two days; it is rubbed, whilst soft, twice a week with a linen cloth, and after that time, once a week or fortnight with a hair cloth, which keeps it very clean, and makes it look well.

The third dairy woman makes her cheese exactly the same as the second, except scalding it, which she does in whey, and much hotter than the second, viz. nearly boiling; she also colours it in the following manner, viz. by rubbing a piece of the best Spanish arnotta upon a smooth stone, or bottom of an earthen pot, into a small quantity of milk till she has sufficient for the arnotta to colour the whole cheese; she then the puts arnotta through a fine lawn sieve into the cheese tub at the time she puts the rennet in. If in turning the cheese, when in press, she finds it not firm, she rubs a little salt upon it; the richer and better the milk is the more salt the cheese requires. In a good dairy nearly three hundred weight of cheese is made from each cow in the year. In this District, the cheese is always made from the new milk, consequently very little butter, and in conformity to the well known adage, "good butter and good cheese, are incompatible in the same dairy." But the ingenuity and frugality of those dairy women from whom I have transcribed their method of making cheese, added to their polite attention and readiness to oblige, enable me also to state their method of making

Whey butter.——*The first* gathers no butter from the green whey, but from the crushings which she sets up in pans for twenty-four hours, then skims off the cream or thick part, and immediately boils it; then before it is cold, she puts it into an earthen pan, in which she collects a week's cream for churning; she likes her cream to be sour, and for that purpose saves a little of the last week, which she puts in the bottom of the pot, and adds the next week's cream to it; she also puts her cream into the pot before it is cold, and in winter sets it near the fire; in summer she churns her milk and whey butter together; she also makes her milk cream as sour as possible. It has been recommended to her by an experienced mistress, to put a small quantity of saltpetre dissolved in water into her milk which she sets up for cream, as a good thing for making the milk throw up a greater quantity of cream, making it churn easier, and giving the butter a better colour; it was also told her it was a good thing for preventing the butter from having any disagreeable taste, such as arise from the cow eating turnips, cabbage, &c. She has tried the experiment, by putting about the size of a hazle nut of saltpetre into as much cream as made six pounds of butter, and approves of it very much; but did not put it into the milk as advised, thinking it would spoil it for family uses.

The second sets up all her whey, as well green as white, for cream, which she gathers every twenty-four hours, into large earthen cream pots; she boils hers only twice a week, and differs from the first by wishing to keep it as sweet as possible, and for that purpose changes it into sweet pots twice a week; she gathers a small quantity of milk cream, which she churns together with the whey cream; her butter is very good and very little inferior to real milk butter.

The third gathers all her whey, as well green as white, into a large brass kettle, over a fire, and as the top or thick part begins to rise, she takes it off with a brass skimmer full of holes; when her whey is near boiling, she puts into it about a quart of cold spring water, and as much cold sour butter milk, which makes it throw up more top or thick curdy cream; she sets it by till cold, then puts it into her cream pots for churning; her cream pots have all tap-holes at the bottom, by which she twice a day draws off the thin whey that has settled there. She likes to keep her cream sweet, and for that purpose sets it in a cold place, and changes it into clean sweet cream pots every two days. In summer she churns her milk cream and whey cream together once a week; her butter is very good, and from her cheese being coloured, it always looks well, and she sells it for the best price in the market, and mostly to the same persons who have bought it before. Another mistress of a dairy, equal for her good management and civility, informs me that she sets both her green and white whey by for skimming twenty-four hours; when skimmed, she puts about a gallon or six quarts of boiling clean water to a panchion (an earthen vessel that holds about six quarts) of cream, and stirs them together well; the water will settle to the bottom, and when cold she takes the cream from it, and puts it into cream pots for churning; she stirs it well in the cream pots once or twice a day, and changes it into clean ones twice a week, to keep the cream as sweet as possible. This is a very much approved mode of making whey butter.

In many parts of the kingdom, the method of making first cheese, and then butter from the whey, may appear curious, but in this district more butter is made from whey than from the cream of milk.

Barn Floors.

In laying plank floors in barns, a practice has been followed and communicated to me by a very intelligent gentleman, who has the management of large estates in the county of Derby, which I think preferable to our common method of laying them hollow, or bedded on chalk. He causes the earth to be taken out and replaced with stone or brick, laid in mortar, and grouted; in this foundation he rests the sleepers, and builds them firmly into it, perfectly level with the surface of the stone, the whole is again grouted, and the plank pinned down to the sleepers in the grout; he assures me, that plank floors laid in this way, will last more than double the time we usually reckon them to do when laid in the common way. And I am well satisfied, that lime burnt from Derbyshire stone, will preserve timber to a length of time, far beyond what at first sight we are apt to believe. I am not quite sure that lime burnt from chalk, has this quality in so great a degree, but I think oak floors laid in lime, more likely to last than in any other way I have seen practised. I proceed in the next place to

THE MEANS OF IMPROVEMENT.

In a large part of the county, denominated the King's-field, every miner has a power of entering at all times upon the lands, and searching for ores, and this even when the corn is growing: some restriction seems necessary. There is a period in the cultivation of all lands, that search might be made without much detriment to the owner of the land; but to search at all times must be a great clog to improvements; perhaps if an adequate compensation could be given, it would be for the good of the community to vest the mineral rights in the owners of the land: but as this respects the rights of individuals, it requires the wisdom of the legislature to suggest an adequate remedy. The subject of tenures leads me to say something

On Tithes.

The collecting of tithes in kind has a tendency to damp improvement, but on one of the largest estates in the county of Derby, the agreeing for the tithes is left entirely between the clergy and the occupiers of the land; and although this is not the case on many other estates, yet it is matter of fact, that no estate in the county is in a better state of cultivation and improvement. So far as this goes, it is a proof that lands may be improved under the present system of tithes, where there is a moderation on the side of the clergy, and candour on the side of the farmers.

To render tithes less obnoxious than at present, the rights of the church more equitable, and to preserve individual rights sacred and inviolate, the clergy loved and honoured, and to keep up the happy influence of religion in the state, are objects well worth the attention of every good citizen. To effect this, where the clergyman is not satisfied with a compensation equal to what the land would produce, without the aid of foreign manure, and where he insists on the full tenth of the produce in its improved state, perhaps the most probable means would be to oblige him to pay one-tenth part of the money *bona fide* expended in manures bought and laid on the land. Such a regulation would do away much of the reasonable objection to tithes, and be no diminution to the estates of the church; on the contrary, I think the *value* of her tithes would increase, and a flow given to the spirit of improvement, by the farmer knowing that a tenth of the money expended therein, was so much paid toward his tithe; give me leave to ask any Derbyshire farmer, who brings nine waggon loads of lime to his farm, if he would not bring a tenth were he sure the titheman must pay for it, if he took the tithe in kind? I am aware of many difficulties that may be thrown in the way of this scheme; the distinction of tithes, as belonging to rector and vicar; the impolicy of obliging a clergyman, whose circumstances might make it imprudent to expend money in the improvement of his tithes, and many others may be raised; but making it optional in the clergy to adopt this measure, or to be content with what he would get if no foreign manure were brought to the land, banishes many objections; and I have no doubt, if this scheme were taken up with candour on both sides, it might be matured into improvement and the good of the community.

The King's-field and tithes are among the greatest bars to improvement; to avoid letting the land to men engaged in other pursuits, or whose talents have not been applied to agriculture. To render every farm sufficiently large to employ both capital and talents, and so as to render agriculture as much a science as the manufacture of cotton, or any other science: to erect the necessary buildings; to provide for the comfort of the cottager at an easy expence, by allowing him to share in the cultivation of as much land as will supply his family with vegetables and milk; to remove every obstacle that stands in the way of a man that has made agriculture his profession, are, in my humble opinion, sure and rational methods of improving this, or any other county. Observations on the local means which fell within my cognizance during my Tour, are the following.

In the Breed of Cattle.

By faithful and accurate experiments, to prove to mankind whether their improved breed of grazing cows can be made equally good for the dairy, with those that are more common, or to cross the breed, so as to get milk, and at the same time retain that blood and shape which gives them a propensity to fatten; and to extend the new Leicestershire breed of sheep, to all soils where they can get a sufficient quantity of food without much travel.

In the Fertile part of the County.

To increase the capital employed in agriculture, to pursue the examples that are now before them on the best managed farms, which I have had occasion already to mention, and to complete the inclosing of that small part which remains to be done.

In the Low Peak.

As their soil improves, to imitate the culture on the fertile soils; to complete the inclosures; and render the buildings commodious.

In the High Peak,

Natural difficulties are far more prominent than in either of the other districts:—the superabundance of the stone; the precipices; the scantiness of the soil; the exposure to the inclemency of the weather, deluged by rains; and its bleakness in the winter snows, are difficulties not easily overcome; but to attempt them, the following strikes me as the most rational method—to gain shelter, after the necessary buildings for a farm are erected, by planting with larch, Scotch fir, birch, and other forest trees suited to the nature of the soil, such parts as are inaccessible to the plough; by inclosing with proper hedges and stone walls, after the manner practised in the northern parts of the kingdom; and raising quick fences by the assistance of stone walls. The superabundance of stone in Derbyshire, I think, makes the method described by the section (Fig. V.) the most eligible of any I can suggest. The advantage proposed by this method of inclosing, is shelter to be gained by planting; that the turf and mould arising out of the ditch added to that on the bank where the quick is intended to be planted, will make a sufficient staple to insure its growth; the shelter afforded by the stone wall is deemed a security for the quick, while it is incapable of defending itself, and from laying the stone in mortar to the height marked on the section, a more permanent advantage is expected; for after the dry wall is gone to decay, this part in mortar will remain, and prevent the escape of even a hare when the thorns have overtopped the walls. I saw many bleak situations in the High Peak, where if a good hedge were raised in this way, and shelter gained by planting, I have no doubt the land would improve to more than double its present value. After being inclosed in this manner, I should recommend the planting of such parts as are inaccessible to the plough. On that part where the plough can perform, I should wish to see the effect of

In the Limestone Soils,——removing no more stone than what cannot be mixed with the mould, and breaking it up so deep, that the plough, at 15 inches, will meet no obstruction from the solid rock; I should not object to any stone that the Hertfordshire plough can turn over being left in the soil, and in this state to mix the surface with peat moss, and a quantity of lime proportioned to the quantity of peat moss. In this state I should like to see the soil properly summer-fallowed, sown with turnips in due season, and after the turnips are fed off with sheep, the land stirred, and with a second stirring sown with barley or oats; with this crop of barley or oats the farmer should sow grass seeds adapted to the pasturage of bullocks, the pasturage of sheep, or the production of hay; as the circumstances, situation, and nature of the soil may render most prudent. The thin soils, on a strata of rock, I am persuaded would be greatly improved by the introduction of sainfoin, especially in the neighbourhood of Buxton.

In the Gritstone Soil, I should like to see the same method pursued till you come to the mixing the surface with peat moss; here instead of peat moss, I should like to see the effect of a mixture of any, and every substance that would increase the staple, to add a due proportion of lime, always leaving rotted vegetables as a basis for lime.

In the Peat Moss, I should like to see the same process used, till you come to the mixing of the surface with soil; here to leave plenty of the stone, to lay clay or marle, and to add a large proportion of lime, I trust would produce effects that might surprise and please the farmer.

From want of local knowledge of the county, I do not know that all this has not been done; but where it has been done, I have no doubt the effects fairly communicated in the margin would be gratifying to the Board; and among the community at large, to me.

In the Soil that is so situated, where irrigation can be practised, and where the nature of the water has been ascertained, I should like to see the effect of the water being impregnated with mucus, arising from the drainage of towns, villages, or even single farm yards; and although this mucus or other matter be in very small proportion, when compared with the quantity of water, yet let not this prevent the experiment, even a little will change the nature of the water, and every little adds; but above all, whoever tries the experiment of irrigation, let him be sure the water is not too rapid, nor too long upon the surface.

In those soils where it is matter of doubt whether the improvement ought to be attempted, and carried on by ploughing, by feeding, or by planting, nothing but the local knowledge of the soil and situation can direct, and no man capable of improving can well be ignorant which to pursue.

In soils where paring and burning will improve, and which I conceive to be all soils where the coarser grasses grow spontaneous, great care must be taken not to pare nor burn too much;

I do not mean that it should not be pared and burnt, I mean that it should not be pared too thick, nor *exhausted too much by fire*; to destroy the roots and seeds of the coarser grasses are the only advantages rationally expected from paring and burning, except the substratum be a peat moss, or where there is no difficulty in the ashes finding a sufficient depth of soil to act as on a menstruum. Many well founded objections have been made to paring and burning, but more than half of them have arisen from exhausting the turf too much: paring too thick is not so objectionable, and especially where the mode of cropping finds an advantage by the turf being rolled instead of burnt; but the chief objection to paring and burning in Derbyshire arises from taking too many white crops after the operation; the land should certainly be rested with the second crop, or before the turf and ashes are exhausted; for want of this many bad effects have been produced.

In soils where planting is preferable, and great is the field for this improvement; bield or shelter for the stem is the great thing wanted, next to nutriment for the roots; here the superabundant stone wants but little alteration to give that bield or shelter; and every foot of this soil is a reproach to the inhabitants of the earth, if not turned to their advantage in this, of all others the most rational mode of improvement.

In all situations I am of opinion that perfect harmony subsisting between the owner and occupier are essential to all improvements, and this desirable end is never so effectually obtained as by leases. I am however free to own, that I have known good understanding maintained, and the farm improved from mutual good offices between landlord and tenant at will; but wherever this is the case, there must be a neighbourhood, and continual intercourse between them, that is not very common; if leases be granted, the obligations should be reciprocal. The tenant's rights and interest should be made the basis on which to build the improvement of the soil; due encouragement should be given, and in the improvement each ought to have a mutual interest: above all, not a word ought to be introduced that is not meant to be religiously observed. It is impossible to make the lease too plain and too well understood; the covenants ought to be calculated exactly to the soil and situation, and old forms and obsolete conditions carefully avoided. In a word, nothing but what is intended to be performed by the tenant should be introduced on his part; for give me leave to observe, that I have oftener known harm than good arise from granting a lease, and thinking no more about the conditions; the consequence is, the tenant begins to imagine "it is all nonsense," he looks more to the practice of his neighbour than to what he has promised under his own hand and seal. And after many years, the lease is resorted to, the covenants have all been broken, it is put into the hands of an attorney, and probably ends in a vexatious suit at law; or else the landlord is obliged to take his estate in such condition as the tenant leaves it, which probably is worse than it would have been if there had been no lease nor any misunderstanding about it.

I beg leave to conclude with remarking, that from the civilities I received in Derbyshire, I have no apprehension of any thing uncivil from any of its inhabitants in their marginal remarks; even those who may differ from me in opinion, I have no doubt will do it with much candour; they will please to recollect that the task of drawing up the present state of agriculture, and the means of its improvement in their district, devolved upon me with an eye to public utility, that it necessarily must involve *opinion*; and I can with much sincerity assure them, that what I have said originated in a desire to render Derbyshire and the community any mite of service in my power; if I am so fortunate as to succeed in the attempt, it will add very much to the pleasure I have already experienced in the civilities shown me by those who favoured me with their communications, and which I shall always remember with the most pleasing sensations.

ERRATA.

Page 9 line 1, leave out the period after the word *soil.*
— 12 — 12, for *county* read *country.*
— 17 — 28, for lands that are *not* deemed too wet, read lands that *are* deemed too wet.
— 18 — 33, after the word *clover* omit the dash, and go on with the remaining part of the sentence; and in the 34th line insert the dash after the word *soil.*
— 33 — 22, for *both* oats and barley, read oats *and* barley.
— 36 — 14, for the numerical number 49,379, read the decimal number 4,9379.
— 42 — 6, for coal *and* wood for fuel, read *coal*; wood for fuel.

APPENDIX

TO THE

AGRICULTURAL VIEW

OF THE COUNTY OF

DERBY.

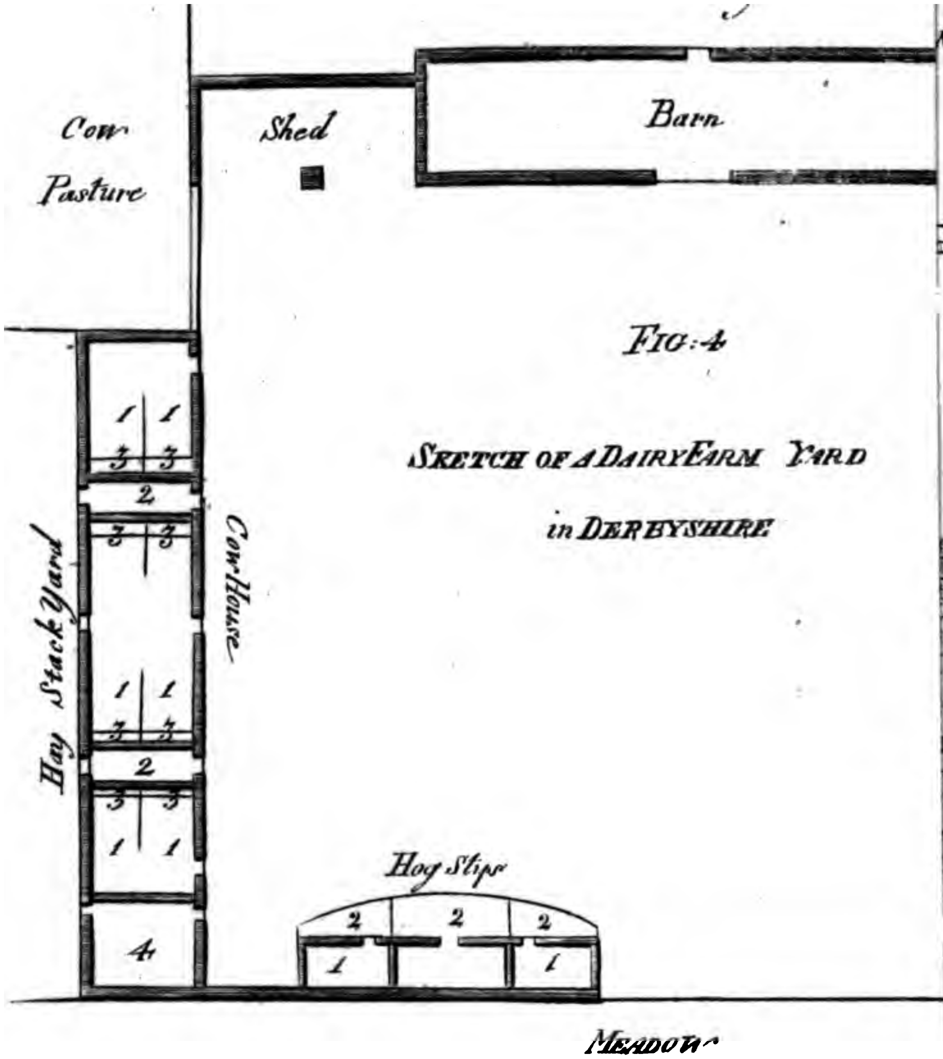
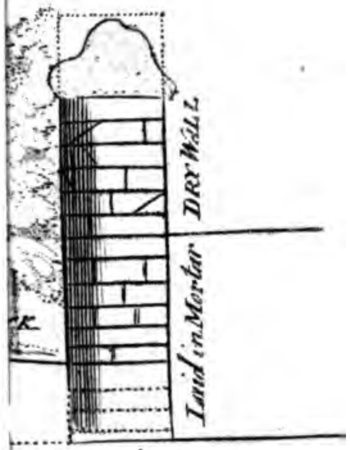


Fig: 4

Sketch of a Dairy Farm Yard in Derbyshire

ng Plow



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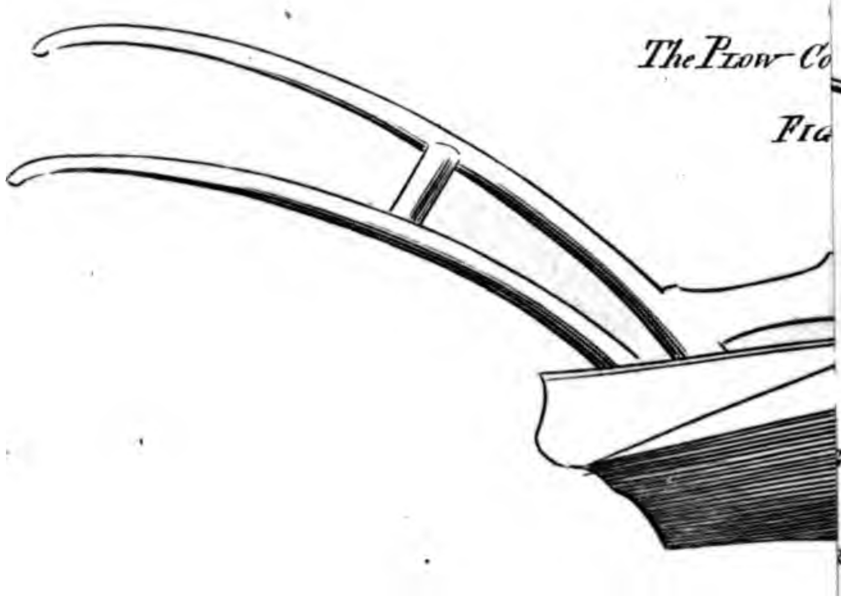

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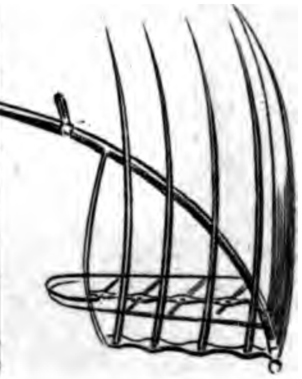

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re Cradle Scythe

APPENDIX.

State of the number of Houses and Inhabitants in the County of Derby, according to Mr. Pilkington, in 1788.

N. B. In the Description, R, signifies Rectory; V, Vicarage; D C, Donative Curacy; C E, Chapel of Ease; H, Hamlet; T, Township; Vil, Village; Cu, Curacy; C, Chapelry.

DEANERY OF RIPPINGTON.

Parish.	Hamlet or other subdivision.	Description.	No. of Houses.	No. of Inhabitants.
Croxhall -	- -	V	4	
	Catton -	H C E	4	
Chilcote -	- -	-	14	
Appleby -	- -	-	59	
Stretton -	- -	R	15	
Measham -	- -	D C	120	
	Donisthorp	Vil	18	
	Okethorp -	Vil	54	
Wilsley -	- -	D C	7	
	Packington -	Vil	32	
Raunston -	- -	R		
Lullington -	- -	V	50	
	Coton -	H	60	
Walton on Trent	- -	R	60	
	Rosliston -	C E	46	
Gresley -	Church Gresley	D C	25	
	Castle Gresley	-	19	
	Swadlincoat -	-	34	
	Linton -	-	39	
	Drakelow -	-	4	
Stapenhill -	- -	V	21	
	Newhall -	H	49	
	Caldwell -	H	16	
Hartshorn -	- -	R	76	406
Calke	- -	D C	13	
Melbourn - -	- -	V	286	1410
Ticknall -	- -	D C	175	
Stanton -	- -	R	31	
	Carried over -		1331	

Parish.	Hamlet or other subdivision.	Description.	No. of Houses.	No. of Inhabitants.
	Brought over	-	1331	
Foremark	- -	D C	26	
Repton	-	D C	195	
	Milton	H	26	
	Bretby	C E		
Newton Solney	- -	D C	47	
	Winshill	H	50	
Stanton near Dale	- -	Cu	58	
Total in the Deanery of Rippington		-	1733	

DEANERY OF DERBY.

Smisby	- -	D C	47	
Aston	-	R	92	452
	Shardlow	H	54	
	Wilne	H	8	
Weston	- -	R	73	
Elvaston	-	V	78	
Barrow	- -	V	43	
	Sinfin	H	6	
	Arleston	H	6	
	Slowston	H	19	
	Twiford	C	15	
Swarkston	- -	R	38	
Willington	- -	V	36	
Mickle over	- -	V	76	354
	Findern	D C	62	259
	Little Over	D C	53	251
	From 1680 to 1700, baptisms 178, burials 130 1760 to 1780, baptisms 237, burials 153			
Mackworth	- -	V	64	
	Markeaton	H	20	
Radbourn	- -	R	32	
Kirk Langley	- -	R	60	
Mugginton	- -	R	180	
Kedleston	- -	R	19	
Scrapton	- -		81	
	Carried over		1262	

Parish.	Hamlets or other subdivisions.	Denomination.	No. of Houses.	No. of Inhabitants.
	Brought over	-	1150	
Borough of Derby All Saints - -	- -	Cu	522	[illegible]
St. Peter's -	- -	V	335	1926
St. Werburgh -	-	V	396	1935
St. Alkmund -	- -	V	244	[illegible]
St. Michael -	- -	V	128	654
	Quarndon -	C	53	
	Little Eaton -	H	39	
Derley -	- -	-	47	
Little Chester -	- -	-	53	
	Normanton -	C	31	
	Bolton - -	C	20	
	Litchurch -	H	8	
	Alvaston - -	C	54	
	Osmaston -	C	16	
Spondon - -	- -	V	158	
	Stanley -	C	41	
	Chaddesden -	C	126	
	Locko -	C		
	Dale, extra-parochial	-	52	
Ockbrook - -	- -	Cu	81	
	Burrowash -	H	33	
Sawley -	- -	Cu	78	
	Wilne -	C	11	
	Long Eaton -	C	105	
	Breason -	C	61	
	Risley -	C	38	
	Draycot -	H	109	
	Hopwell -	H	4	
Sandiacre - -	- -	Cu	68	
West Hallam -	- - -	R	66	
Kirk Hallam -	- -	V	8	
	Mapperly -	H	42	
Ilkeston -	- -	V	272	
	Cotmenhay -	H	61	
	Little Hallam -	H	16	
Heanor -	- -	V	22	
	Codnor -	H	56	
	Loscoe -	H		
	Langley -	H	24	
	Milnhay - -	H	12	
	Shipley -	H		
	Heanor Wood -	H	39	
Morley - -	- -	R	50	260
	Smalley -	C	98	507
	Carried over		4825	

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Parish.	Hamlet or other subdivision.	Descrip-tion.	No. of Houses.	No. of Inhabitants.
	Brought over		4825	
Horsley	- -	V	102	
	Horsley Wood House	H	64	
	Kilburne	H	50	
Breadsall	-	R	58	
Allestry	- -	D C	21	
Duffield	- -	V	208	788
	Heage	C	162	
	Belper	C	433	
	Holebrook	C	84	405
	Turnditch	C	30	
	Mackeney	H	23	98
	Hazzlewood	H	20	
	Windley	H		
	Shottle	H	107	
	Postern	H		
Crich	-	V	87	
	Codington	H	19	
	Fritchly	H	36	
	Wheatcroft	H	19	
	Edge Moor	H	14	
	Wessington	H	29	
	Tansley	H	29	
Pentridge	-	V	90	
	Ripley	H	140	
Blackwel	-	V	73	378
Brampton	- -	Cu	325	
		Total	7048	

DEANERY OF CASTILLAR.

Parish.	Hamlet or other subdivision.	Descrip-tion.	No. of Houses.	No. of Inhabitants.
Chellaston	- -	D C	42	
Egginton	- -	R	51	
Marston	- -	V	129	
Sudbury	- -	R	66	
Doveridge	-	V	145	750
Somersall	-	R	17	
Cubley	-	R	60	
	Marston Montgomery	C	71	
Boylston	- -	R	50	
Sutton on the Hill	-	V	78	
	Carried over		709	

Parish.	Hamlet or other subdivision.	Denomination.	No. of Houses.	No. of Inhabitants.
	Brought over -	-	[illegible]	
Etwall -	-	V	[illegible]	
	Burnaston -	H	32	
	Barrowcoat -	H	4	
Church Broughton	- -	V	48	
Dalbury -	-	R	37	
Trusley -	- -	R	10	
Barton -	-	R	5	
Longford -	-	R	80	
	Longford -	H		
	Hollington -	H	21	
	Roodsley -	H	21	
	Alkmonton -	H	11	
	Bentley -	H	9	
Brailsford -	-	R	114	
	Ostmaston -	H	34	
Shirley -	-	V	43	
	Yeavely -	C		
Denby -	- -	Cu	138	
		Total	1300	

DEANERY OF ASHBOURN.

Norbury -	-	R	43	
	Snelson -	C	67	
Edlaston -	-	R	34	
Ashbourn -	-	V	480	
	Clifton -	C	24	
	Croft and underwood	C	34	
	Yeldersley -	C	6	
	Hulland -	C	39	
	Alsop - -	C	11	
	Parwich -	C	91	
Mapleton -	-	R	32	161
Fenney Bentley -	-	R	20	130
Thorp -	- -	R	28	
Hartington -	Town quarter -	V	63	318
	Lower quarter -	T	56	281
	Middle quarter -	T	70	318
	Upper quarter -	T	130	
		Carried over	1234	

Parish.	Hamlet or other subdivision.	Description.	No. of Houses.	No. of Inhabitants.
	Brought over -	-	1234	
Bradbourn -	- -	V	32	
	Atlow -	C	24	
	Ballington -	C	14	
	Aldwark -	T	18	
	Brassington -	C	130	482
Hognaston -	-	R	52	
Bradley -	-	R	46	
Tissington -	-	C	44	192
Kirk Ireton -	-	R	120	
Carsington -	-	R	46	
Worksworth -	The town -	T	486	
	The rest of the township	T	162	
	Alderwashley -	C	57	
	Cromford -	H	120	
	Middleton -	H	64	
	Ibol and Grange -	T	23	
	Hopton -	H		
	Caulow -	H	12	
	Biggen -	-	23	
	Alton - -	-	4	
	Hitheridge Hay	-	20	
	Ashley Hay -	-	20	
Bonsall -	- -	R	240	
Matlock -	-	R	373	
		Total	3364	

DEANERY OF CHESTERFIELD.

Southwingfield -	- -	V	127	
Alforton -	The town -	V	182	
	Rest of the parish		262	
Pinxton -	-	R	70	322
South Normanton -	- -	V	121	588
Tibshelf -	- -	V	115	
Shirland (including part of the hamlets of Stretton and Higham)	- -	R	176	
Morton -	-	R	24	
	Blackenfield -	H	30	
North Wingfield -	- -	R	30	
	Williamthorp -	H	10	
	Carried over		1147	

Parish.	Hamlet or other subdivision.	Description.	No. of Houses.	No. of Inhabitants.
	Brought over	-	1147	
North Wingfield cont.	Pilsley	H	42	
	Stretton	H	31	
	Ford	H	25	
	Hanley	H	14	
	Clay-cross	H	46	
	Tupton and Woodthorp	H	60	
	Ainmoor	H	19	
Ashover		R	321	
	Dethick	C	3	
	Lea	H	27	
	Holloway	H	14	
Wingerworth		Cu	61	
Chesterfield		V	801	3626
	Brimington	C	80	
	Temple Normanton	C	25	
	Newbold	C	119	
	Dunstone	H		
	Walton	H	75	
	Tupton	H	22	
	Calow	H	44	
	Hasland	H	97	
Sutton in le Dale		R	23	
	Duckmanton	H	53	
Heath		V	64	
Hucknall		V	32	
	Stanesby	H		
	Rowthorn	H	14	
	Astwood	H	28	
	Arstaff	H	24	
	Hardwick	H	2	
Pleasely		R	82	
Over Langwith		R	24	
Scarcliff		V	82	
Bolsover		V	217	
	Glapwell	H	19	
Elmton		V		
	Cresswell	H	52	
Whitwell		R	138	
Clown		R	78	
Balborough		R	128	
Stavely		R	250	
	Netherthorp	H		
	Woodthorp	H		
	The three Hanlys	H		
	Carried over		4383	